

UNIVERSITY OF ECONOMICS IN PRAGUE

DIPLOMA THESIS

2015

Mai Vuova

**University of Economics, Prague**

International Business – Central European Business Realities



**Mergers and acquisitions as a measure to overcome  
financial crisis with focus on airlines industry**

**Author:**

Mai Vuova

**Thesis supervisor:**

doc. Ing. Josef Tauser, Ph.D

**Scholar year:**

2014/2015

**Declaration:**

I hereby declare that I am the sole author of the thesis entitled “Mergers and acquisitions as a measure to overcome financial crisis with focus on airlines industry”. I duly marked out all quotations. The used literature and sources are stated in the attached list of references.

In Prague, August 2015

Signature: Mai Vuova

### **Acknowledgement**

I hereby wish to express my appreciation and huge gratitude to the supervisor of my thesis “Mergers and acquisitions as a measure to overcome financial crisis with focus on airlines industry”, *doc. Ing. Josef Tauser, Ph.D* for a full support.

**Abstract**

The main aim of the thesis is to find out whether merger or acquisition could help the airline to overcome the financial instability. To analyze that, this paper is using traditional financial ratios and basic airline measurements to check how airline enterprises join forces to achieve positive financial results in the current environment with an emphasis on how mergers and acquisitions have helped chosen corporations to overcome the crisis. First part of the paper is the theoretical explanation of merger and acquisition and the theoretical framework of the profitability, liquidity and solvency ratios. The second part focuses on the practical analysis of the selected airlines.

**Key words:**

Merger, acquisitions, profitability ratios, liquidity ratios, solvency ratios, airline industry, basic airline measurements

## **Abstrakt**

Hlavním cílem této práce je zjistit, zda fúze nebo akvizice letecké společnosti může pomoci k překonání finanční nestability. K analýze, jsou v práci použity tradiční finanční ukazatele a speciální indikátory specifické pro letecký průmysl. Použitím těchto ukazatelů, práce analyzuje zda spojení dvou aerolinií dokáže pomoci k dosažení pozitivních finančních výsledků a překonání nestability a krize. První část práce se věnuje teoretickému vysvětlení fúzí, akvizic a finančních ukazatelů ziskovosti, likvidity a solventnosti. Druhá část práce je zaměřená na praktickou analýzu vybraných leteckých společností.

## **Klíčová slova:**

Fúze, akvizice, ukazatele rentability, ukazatele likvidity, ukazatele solventnosti, letecký průmysl, základní indikátory leteckých společností

# *Table of Contents*

<b>INTRODUCTION</b>	<b>9</b>
<b>1. MERGER AND ACQUISITION</b>	<b>11</b>
1.1. TYPES OF MERGERS AND ACQUISITION	12
1.2. A HISTORICAL OVERVIEW SINCE THE LATE 19 <sup>TH</sup> CENTURY	15
<b>2. THEORETICAL FRAMEWORK OF FINANCIAL ANALYSIS</b>	<b>19</b>
2.1. FINANCIAL RATIOS	20
2.2. BASIC MEASUREMENT IN THE AIRLINE BUSINESS/	23
<b>3. AVIATION INDUSTRY</b>	<b>25</b>
3.1. GLOBAL AIRLINES TRENDS	28
3.2. EXTERNAL EVENTS IN 21 <sup>ST</sup> CENTURY	28
3.3. JET FUEL PRICES	31
3.4. AIRLINES	33
3.4.1. BRITISH AIRWAYS AND IBERIA MERGER 2011	33
3.4.2. CZECH AIRLINES AND KOREAN AIR ACQUISITION IN 2013	35
3.4.3. US AIRWAYS AND AMERICAN AIRLINES MERGER 2013	37
<b>4. RATIO ANALYSIS OF THE AIRLINES</b>	<b>39</b>
PROFITABILITY RATIOS	39
LIQUIDITY RATIOS	39
SOLVENCY RATIOS	39

<b>4.1. BRITISH AIRWAYS &amp; IBERIA</b>	<b>40</b>
<b>4.2. CZECH AIRLINES &amp; KOREAN AIR</b>	<b>45</b>
<b>4.3. AMERICAN AIRLINES &amp; US AIRWAYS</b>	<b>49</b>
<b>5. MEASUREMENT IN THE AIRLINE BUSINESS</b>	<b>53</b>
<b>5.1. BRITISH AIRWAYS &amp; IBERIA</b>	<b>53</b>
<b>5.2. KOREAN AIR</b>	<b>54</b>
<b>5.3. AMERICAN AIRLINES &amp; US AIRWAYS</b>	<b>56</b>
<b>CONCLUSION</b>	<b>58</b>
<b>REFERENCES:</b>	<b>60</b>
<b>APPENDIX</b>	<b>67</b>



## Introduction

Nowadays in aviation industry is hold a phenomena and an essential part of the global economy. In connection with the development and liberalization of air transport, the aviation market is being filled up with competitors (mainly low-cost airlines) at the moment and for that reason airline enterprises are seeking cooperation to remain competitive in the sector. Different industries may be affected differently, it might decrease entry barriers or open a new markets.

It would not be wrong to say, that aviation industry is lately experiencing a revolutionary period. Some of the well-known companies have disappeared, due to bankruptcy <sup>1</sup> or acquisitions <sup>2</sup>. Recently we have seen mergers of Delta Airlines/Northwest Airlines, Air France/KLM, British airways and Iberia, etc. Continuing with financial issues, during the last decades airline industry has faced several major obstacles, namely a terrorist attack, (9/11), a natural disaster, (volcano eruption) or a financial crisis. Airlines were forced to merge during the crisis to overcome their difficult situation. It is therefore one way that helps airlines succeed in the most difficult times. Question I am arising is, whether aviation enterprises, in financial difficulties, that have decided to merge or acquire would have overcome their troubles and grow into successful and profitable corporation again.

Therefore, the aim of this paper is to describe specific ratio behaviors in the aviation industry and to analyze how airline enterprises join forces to achieve positive financial results in the current environment with an emphasis on how mergers and acquisitions have helped chosen corporations to overcome the crisis.

The study presents a quantitative analysis of information founded in financial statements (consolidated financial statements, overall picture) of selected airlines enterprises. Data used for the analysis was taken from published annual reports of airlines. Analysis is based mainly on cases of chosen corporations not the whole airline industry; therefore the results may probably not be used for different airlines.

---

<sup>1</sup> E.g. American Airlines 2012, Delta Air lines 2005

<sup>2</sup> E.g. Northwest 2007

Results, that will be found out will not be connected to prices of the airplane tickets, due to the fact that the author of this paper believes that prices are different in each season, based on the demand. Therefore, evaluating this analysis in different years with different companies would lead to different prices and therefore conclusion. Further tables present formula and operational measurements possibly use for comparison.

Ratio analysis would be comparison that will show the relationship of financial figures to past years and with regards to that compare also with other corporations in aviation industry.

Quality depends on the quality of published financial data and accounting policies of chosen companies. One of the limitations of this paper is that the ratio analysis is based clearly on balance sheets and income statements that contain just static information. Therefore for the further analysis, the basic measurement for the airline industry was added. However for future analysis to get better comparison among airlines, set of cash flow ratios would be recommended to give a more comprehensive overview.

The central question to be answered in this thesis is:

- *“Does the merger help the airlines to overcome the financial instability?”*

Furthermore the central question arises more sub questions:

- *“How do we measure the profitability of the airline?”*
- *“Are traditional ratios enough for analysing the financial situation of an airline?”*

## 1. Merger and Acquisition

Every organization is aiming for prosperity and growth, expansion and synergy are one of the basic assumptions. Helping corporations to increase not only earnings per share but also enables them to hire top quality managers and directors, therefore strengthening the brand and the reputation of the company. Furthermore, mergers or acquisitions are one of the strategies that help companies to expand to different markets and as previously mentioned, to obtain growth, therefore the merger of two or more corporations could actually be considered as a way to gain profit and market share or an attempt to diversify into another business area.

As it was mentioned above, mergers and acquisitions (hereafter M&A) represent one way to develop the company. Every company that wants to maintain its long-term competitive advantage is constantly considering the growth with the help of M&A. Success of the firms is based on their ability to allocate resources into areas with growth potential, therefore M&A is an important topic in business nowadays.

As to growth, it is one of the basic motives for M&A. Firms are facing the choice between organic growth, the growth rate that a company can reach by increasing output and supporting sales, or growth with the help of M&A. Growth inside the company could be slow and through M&A it could be to way faster process. However both options hold huge risks and uncertainties. One major issue with internal organic growth is its slow process and sometimes firms cannot afford to wait a “couple” of years, as a competitor’s response is quick and they may take lion’s share of the market. Another reason to go with a merger is expansion to different geographic areas through an international merger. In this case M&A would be the lowest-risk alternative.

When it comes to the term synergy, it is possible to understand as a reaction of two firms combine to produce a greater profit and market share than the sum of the two separate firms could account for. In the other words, synergy refers to the phenomenon of  $1+1=3$ .

There are various motives and reasons that determine M&A, as mentioned above one reason is growth, where firms merge or acquire another firm to gain higher profit.

Increasing profit may come as a result of economies of scale<sup>3</sup> or economies of scope<sup>4</sup>. People can find numbers of motives to support M&A including a desire for another firm's research and development department or a more effective distribution system.

The main distinction between a merger and an acquisition is based on how the companies are brought together. In cases of mergers, we assume that Firm A and Firm B are existing companies. Both firms for some reason consider a merger as a profitable step and they believe there would be synergy effect available and based on negotiation two firms create a new larger one, we could assume as Firm C. Furthermore depends on the corporation if they will operate under their old name (in this case Firm A and Firm B) or under the new name (in this case Firm C).

On the other hand, when it comes to acquisitions, usually negotiation is not needed. In an acquisition Firm A buys Firm B, therefore Firm B would be owned by Firm A.

### 1.1.Types of mergers and acquisition

Merger<sup>5</sup> is basically a connection of two or more companies that creates a separate and independent company, in the different words it is a combination of two companies and they form an entirely new company, while an acquisition is the purchase of one firm or their division by another, where no new firm is created<sup>6</sup> and only one firm keep its existence.

#### Horizontal mergers

It comes to horizontal merger<sup>7</sup>, if the merging companies are functioning in the same industry could also be characterized as a combination of competitors<sup>8</sup>. This type of merger helps to expand company's services or product portfolios. Synergy can be achieved through gained market share, cost saving to create more efficient economies

---

<sup>3</sup> reduction in per-unit costs that come as the size of a company gets bigger

<sup>4</sup> gaining efficiency through higher variety of products

<sup>5</sup> In some literature we will find term merger = consolidation.

<sup>6</sup> Investopedia (2015)

<sup>7</sup> Patrick A. Gaughan (2015)

<sup>8</sup> Sherman (2006)

of scale. An example of this merger could be Daimler-Benz and Chrysler, the global oil production sector, electricity, pharmaceuticals, banking, insurance or food and drinks. Firms are selling products, which are not identical but they are related to each other. Therefore we refer to horizontal mergers as a merger among “same” companies.

Horizontal mergers generally occur at markets, whose products are often in the mature or declining stages of life cycle.<sup>9</sup> It causes an increase of market power that leads to a lowering of the competition and increases the strength of steady companies. One of the reasons, these industries are going through the horizontal merger is the pressure to achieve cost efficiency and to be able to compete.

#### Vertical mergers<sup>10</sup>

Vertical mergers represent the purchase or connection of companies that are somehow linked with each other on a different level of the supply chain. It could be a merger of companies that produce different products that at the end, develop one specific product. Therefore, this type of merger occurs among firms that operate in different vertical chains, which represents various stages from raw material inputs to the final product that is sold to customers. An example could be mergers between engine manufacturer and automobile manufacturer. It leads to better efficiency, integration and also coordination between sectors. Vertical mergers could be divided into forward integration, which would refer to integration towards the customers, when backward integration would refer to integration towards suppliers. The main reasons supporting vertical mergers are mostly to increase efficiency, reduce the risks and negotiation related to suppliers and increase the control over the organization by covering everything from raw materials to sales.

#### Conglomerate merger and acquisitions

The third type is called conglomerate acquisitions, which actually represent purchases or deals between two irrelevant firms. Therefore it occurs when the firms are not

---

<sup>9</sup> Sudarsanam (2004)

<sup>10</sup> Miller, Edwin (2008)

competing or do not have a seller-buyer relationship. Based on Investopedia there are two types of conglomerate mergers: pure and mixed. Pure mergers concern companies that have absolutely nothing in common and mixed conglomerate merger engages firms that are seeking goods and services extensions. Another reason could be diversification and cutting of risk. However, they are facing the risk of being unfocused and distracted with the new products or markets.<sup>11</sup> Diversification is usually measured by the amount of area or industries that company is operating in; the larger the number, the larger the diversification. One of the best example, that could be given, is General Electric. GE has a wide and diversified portfolio of firms that are not connected to each other.

### Cross-border acquisitions

The number of cross-border acquisition has increased in recent years due to the globalization of world trade and industry.<sup>12</sup> This type of acquisition is considered much more complex caused by differences in countries political regimes, the economic environment, tax and accounting rules<sup>13</sup> and culture and tradition. The main reasons supporting cross-border M&A vary by industry, but when it comes to the air mode transport sector, it is clear that globalization is the main factor. Companies are looking for new market opportunities abroad through geographical diversification. One of the benefits of cross-border type of merger is that firms are able to increase their profit at home as well as abroad and that also leads to higher efficiency. International airline mergers could lead into a connection of global routes and creating international hubs that might lead to lowering the cost of providing the service itself.

---

<sup>11</sup> Sherman (2006)

<sup>12</sup> OECD, Cross-border mergers and acquisitions

<sup>13</sup> IFRS versus US Gaap

## 1.2.A historical overview since the late 19<sup>th</sup> century

Several periods of high merger activity occurred in the last century; they are usually called merger waves. Each wave happened due to different events. However, we are able to find similarities among those waves and understanding the basic pattern will help us predict, how the next wave may evolve. Research showed that waves are caused by a combination of economic, political and technological shocks. The economic shock is provoked by rapidly increasing aggregate demands in the economy and mergers are a quicker form of a company expansion than internal organic growth. Political shocks may occur due to the governmental changes with regards to regulation. Technological shocks could be evoked in form of technological innovation in existing or new industries<sup>14</sup>. The very first wave of mergers happened around the end of the 19<sup>th</sup> until the beginning of the 20<sup>th</sup> century, and was associated with the industrial revolution. During this era industrial production increased by 100% and mergers appeared in industry such as railroads, electricity, tobacco, etc. This wave consisted mainly of horizontal mergers<sup>15</sup> that took place among heavy manufacturing industries such as steel, metal and constructions<sup>16</sup>. During this period, mergers involve mostly companies, whose aim was to achieve a monopoly, and the negative impact of that was suppression of competition, therefore this era resulted into creating a monopolistic market structure. Based on study of Professor Nelson – National Bureau of Economic Research, eight industries that were major in the first wave of mergers were mainly metals, food products, gas industry, chemicals, transportations, metals, machineries and coal industry. This period is also known for the first billion-dollar merger of U.S Steel and Carnegie Steel. At that point, US steels controlled 75% of American steel capacity<sup>17</sup>. Besides US Steel, other big players like DuPont, GE or American Tobacco came into existence in the first wave. At the end of the first merger wave, the increase of concentration within companies was visible.

---

<sup>14</sup> Gaughan (2015)

<sup>15</sup> Sudarsanam (2004)

<sup>16</sup> E.g. US Steel

<sup>17</sup> Gaughan (2015)

**Table 1: Mergers by type in the first wave**

Type of merger	Percentage (%)
Horizontal	78,3
Vertical	12
Horizontal and vertical	9,7
TOTAL	100

Source: Fligstein, *The transformation of Corporate Control* 1990

The second wave occurred after World War I. during a financial boom. George Stigler compared the second merger wave to “merger for oligopoly”. The expansion led to developments in the field of transportation by automobiles that provided the needed infrastructure for M&A to take place. Cars and trucks gave firms opportunities to reach customer personally and it was characterized by strong horizontal integration between secondary producers in heavy industry. Most of these industries were manufactures of automobile tools, food and chemicals.<sup>18</sup> Investment banks financed most of the mergers, therefore they played a key role in this period. Unfortunately, this era ended by the end of 30’s with the start of the great depression.<sup>19</sup> The second wave created fewer monopolies but more oligopolies and a higher number of vertical mergers. However during this era U.S. government was focusing on splitting up cartels or pools and tracking unfair business practices to stop anticompetitive mergers. As in the first merger era, the second era was the origin to the formation of firms such as General Motors and IBM.

The third wave of mergers happened in the second half of 60’s and it was related mainly with conglomerates rather than vertical or horizontal mergers. For that reason the level of competition in industries did not really change although the number of merger increased compared to the previous waves. Most of the mergers that occurred in this era were triggered by increasing stock and interest rates and were financed by equities; thereby the important roles of banks were eliminated. During this era, it was common for relatively small companies to target bigger ones for acquisition. The Federal Trade commission stated that almost 80% of merger took place between 1965 and 1975, were conglomerate mergers.<sup>20</sup> The companies that were formed during the

---

<sup>18</sup> Gaughan (2015)

<sup>19</sup> Economy watch

<sup>20</sup> Gaughan (2015)



third wave were diversified, meaning that they have subsidiaries in different industries but a majority of their products in one industry<sup>21</sup>. An example of merger during these years could be ITT. ITT had acquired businesses in car, hospitality and financial industry. The motive of growing an outside company's industry had a major role during this conglomerate era. The third wave of merger ended with the plan of the Attorney General<sup>22</sup> to split corporations due to inefficient performance. The strong antitrust law came to an end in 1972<sup>23</sup>.

**Table 2: No. of mergers during the 3rd wave**

Year	1963	1964	1965	1966	1967	1968	1969	1970
Mergers	1361	1950	2125	2377	2975	4462	6107	5152

Source: Mergers, Acquisitions, and corporate restructurings, 4<sup>th</sup> edition

The fourth wave of mergers started in the beginning of the 80's. The volume of merger was great in oil and gas industries, pharmaceutical industries, banking and aviation industries, which resulted in concentration within those industries. The percentage of hostile takeovers in total value rose during this era. This period became significant for billion-dollar mergers and acquisitions. Acquisitions in this era were much bigger in size compared to the previous wave. Cross border M&A became regular with most of them being hostile takeovers. As an example, we could mention Kohlberg Kravis buying RJR Nabisco for 25.1 billion USD<sup>24</sup> (price in 2014 – 54.1 bil USD), Chevron taking over Gulf Oil<sup>25</sup> or Philip Morris targeting Kraft<sup>26</sup>. Main points of fourth merger wave are firstly aggressive role of investment banks, more developed ways of takeover strategies shown with innovative M&A techniques, higher use of debt that gave smaller firms opportunity to bid for larger companies, conflict between the federal and state governments, a significant number of mergers outside of the United States and industries response to deregulation.

---

<sup>21</sup> Gaughan (2015)

<sup>22</sup> John Mitchell, Richard McLaren are the authors of the Attorney General

<sup>23</sup> Gaughan (2015)

<sup>24</sup> Nestle (2013)

<sup>25</sup> Vassiliou (2009)

<sup>26</sup> Gaughan (2015)

**Table 3: No. of mergers in the 4th wave**

Year	1983	1984	1985	1986	1987	1988	1989
Mergers	2533	2543	3001	3336	2032	2258	2366

Source: Mergers, Acquisitions, and corporate restructurings, 4<sup>th</sup> edition

The fifth wave, starting at the beginning of the 90's and in Europe at the end of the 90's, was mainly composed of mergers among companies in the same industry. While the previous waves mostly occurred in the United States, the number of merger again started to increase and this time it was truly an international wave. The industries with heavier activities of mergers were banking, healthcare and telecommunications<sup>27</sup>. This was due to the deregulation in the banking industry as well as in telecommunication. Even though large mergers occurred during this period, we can find more of the strategic mergers rather than hostile takeovers.<sup>28</sup> Deals that happened during this era were motivated mainly by specific strategies to achieve internal expansion and not engaged in the short term financially oriented tasks. The largest merger in history with a value of 203 billion USD was the acquisition of Mannesmann AG by Vodafone Airtouch PLC in June 2000<sup>29</sup> and the fifth wave ended around the years 2001 and 2002, as an explanation we can mention reasons such as the twin towers destruction or Enron's collapse that led to decrease of economic activities and changes in priorities of public spending. Continuing with the merger waves we are able to talk about the sixth wave that occurred during 2004 until strike of financial crisis in 2007 when economy entered into a recession.

This chapter has briefly concluded the processes of merger and acquisition during the last century, which was characterized by five main eras of intense merger and acquisition activity.

---

<sup>27</sup> Megginson, Smart (2008)

<sup>28</sup> Graham (2012)

<sup>29</sup> Gaughan (2015)

## 2. Theoretical framework of financial analysis

The main purpose of this thesis is to analyze the profitability of the airlines pre- and post- merger periods, especially on whether the merger had positive effects for the companies. To focus on the three examples of airline mergers, this paper will use ratio analysis based on the merger of British Airways and Iberia, Czech Airlines and Korean Air and in the United States' merger between US Airways and American Airlines. Ratios will be computed for the pre- and post- merger period to find out specific behavior of selected profitability, liquidity and solvency ratios. Moreover, the financial performance of selected corporations will be described through the outcome of the ratios.

**Table 4: Ratio Formulas**

TYPE	RATIOS	Definition
Liquidity	Current ratio	current assets/current liabilities
	Quick ratio	cash+acc receivables/current liabilities
Cash flow	CF to debt ratio	CFOA/total liabilities
	cash interest coverage ratio	CFOA(+interest paid+taxes paid)/interest paid
	Capital expenditure ratio	CFOA/investments
Leverage	Debt ratio	total liabilities/ total assets
	debt equity ratio	total liabilities/total equity
	equity ratio	total equity/total assets
	Interest coverage ratio	EBIT(operating income)/interest expense
Activity	Asset turnover	sales/ (average)total assets
	average collection period	Average account receivables/average daily sales
	Inventory turnover	Sales/(average)inventory
Market	EPS	net income/ no. of shares
	Price earning ratio	market price per share/earning per share
	price book ratio	market price per share/ book value per share
Profitability	(Gross) profit margin	(gross profit/sales) OR net income/sales
	ROA	EBIT/total assets
	ROI	net income/(total liabilities+equity)
	ROE	net income/equity
	ROCE	EBIT/net assets
	EVA	(ROCE-WACC)x capital employed

Source: Financial reporting class

The financial ratios presented in the table above, will help to measure the profitability and risk of the company. Formulas will be used in accordance of financial statement analysis. Subsequently the table presents a summary of ratios that could be used to calculate profitability, liquidity and solvency for each company.

## 2.1.Financial ratios<sup>30</sup>

This part of the paper will focus on theoretical framework of profitability, liquidity and debt ratios that are going to be used in the practical part of this paper later on. The first group of ratios evaluate how the airline is performing in relation to its turnover, assets and equity. The second group measures the risk of the airline not being able to cover their short term financial commitments and the third group deal with the risk, of airlines not being able to meet their total financial commitments. Some of the ratios use only data from Profit & Loss accounts and some use data from balance sheet accounts.

### a. Profitability ratios<sup>31</sup>

Return on assets (ROA) ratio indicates how profitable a firm is relative to its total assets. It shows how a company is using its assets to make a profit. The higher the return, the better the asset base. The ROA is calculated by comparing net income to total assets and it is expressed in percentage. In case of airline industry that is capital-intensive business (huge investment in fixed assets), it is going to be more assets heavy and calculating ROA is based on a large number in the denominator. It is important to mention that return on assets, same as return on equity is calculated with only 12 months data, therefore the fluctuation in the company earnings can affect the ratio drastically.

Return on equity (ROE) ration indicates how profitable a firm is by comparing its net income to the average shareholders' equity. It measures how much do the shareholder earn for their investment. The higher the percentage, the better is the equity base.

---

<sup>30</sup> Troy Leo (2005)

<sup>31</sup> Fridson (1996)

Gross profit margin using the percentage calculation to give a comprehensive measure of a firm's profitability on historical basis. It gives an overall view of controlling costs and revenues. A company's costs of sale deducted from the company's revenue results in a company's gross profit. A higher margin percentage is a favorable profit indicator. In 2011, International Air Transport Association (IATA) estimated margin in airline industry to be around 2,7%.

Asset turnover is the amount of sales generated per one dollar of assets. It shows the efficiency of how company is using their assets. The higher ratio, the better, since it shows that the company is generating higher revenue per one dollar of assets, however this ratio is widely different among various types of industries<sup>32</sup>, so comparisons are useful only in the same sector.

A fixed assets turnover ratio measures how company is generating revenue dependent on company's fixed assets (property, plant and equipment). The formula for this ratio equals to revenue divided with PPE.

b. Liquidity ratios<sup>33</sup>

The current ratio is used to measure a firm's liquidity, if a firm has enough ability to re-pay its debt over next year. Ratio compares current assets to current liabilities and has to be calculated carefully due to the fact that it could be misleading. A high current ratio does not mean perfect results, and on the other hand a low current ratio does not necessarily mean bad result. A ratio of 1 is considered for the industry to be good and any number below could indicate that the firm is not able to generate enough cash to cover its short-term debts<sup>34</sup>.

Quick ratios, also called acid tests, test a firm's ability to use its cash to cover current liabilities.<sup>35</sup> It excludes inventory and other current assets that are more complicated to turn into near cash. Quick ratio also gives us an idea of firm's ability to pay its

---

<sup>32</sup> Grünwald, Korbová.(2007)

<sup>33</sup> Fridson (1996)

<sup>34</sup> Grünwald, Korbová,(2007)

<sup>35</sup> Marek,(2009).

short term debts with short term assets.<sup>36</sup> There are no targets on the desirable number of this ratio in particular.

The cash ratio shows a firm's ability to cover its current debts with all cash or cash equivalents that are in the current assets. Therefore, it equals to cash added cash equivalents added invested funds and all divided by current liabilities. However, the ratio takes into account only the most liquid short term assets of the company and it ignores receivables and inventories.<sup>37</sup>

c. Solvency ratios<sup>38</sup>

The debt to equity ratio is one of the leverage ratios that is able to compare a company's total liabilities to its total shareholders' equity. In other words, ratio measures all of the firm's future obligations in the financial reports relative to equity. Another variation of the ratio is called long-term debt to equity ratio that uses only long term debt instead of total debt in the numerator. In the airline industry, based on longer periods the ratio usually moves from 1,42 to 2,46<sup>39</sup>.

The debt to capitalization ratio is its total debt to its total capital. It measures a firm's debt to its capital structure. Capitalization ratio equals to long-term debt divided by long term debt added to shareholders' equity.

The interest coverage is used to show a firm's ability to pay its interest expenses on its debts.<sup>40</sup> The ratio is calculated by taking EBIT (Earnings before taxes and interests) and dividing it by the firm's interest expenses for the particular period. The higher the ratio, the better chances of a firm being able to pay its interest expenses. IATA recommends ratio not to fall under 1,5.

The cash flow to debt ratio measures the time that it would take the firm to pay its total debt using just their cash flow. In other words, the ratio compares a firm's

---

<sup>36</sup> Grünwald, Korbová, (2007)

<sup>37</sup> Marek (2009).

<sup>38</sup> Troy Leo (2005)

<sup>39</sup> IATA

<sup>40</sup> Marek (2009).

operating cash flow to its total debts to provide an indication of a firm's ability to pay its total debt within their cash flow.

However, even if we are able to cover all the ratios from formal and published financial statements, this, very important and crucial, are not able to cover the whole measurement of profitability. It is an important note that accounting choices can influence financial ratios. Although financial reporting is needed to understand and correctly interpret a company's financial position, data has to be compiled with other special airline data. Understanding financial statements of airlines is required to be able to evaluate the merger or acquisition.

## 2.2. Basic measurement in the airline business<sup>41/42</sup>

### a. Available Seat Mile (ASM) / (ASK)

ASM measures an airline flight's passenger carrying capacity. It is usually number of seats available multiplied by the miles (kilometers) flown. As an example, let's say that an aircraft has 200 seats available for flight long 1000 miles. This means that it would generate 200000 ASMs for that flight.

### b. Revenue Passenger Mile (RPM)

RPM measures the length of the flight multiplied by revenue per passenger aboard. This basic measurement can be considered as the basic production that airlines make. With ASM, these measurements can be used to check unit revenues and unit expenses.

### c. Load Factor

Passenger load factor measures the capacity utilization, it shows how the airline efficiency to fill the seats and generates revenue. Based on the IATA statistics, the load factor for the airline industry in the year 2013 was around 79%.

---

<sup>41</sup>American Airlines (2015)

<sup>42</sup> MIT Glossary, airline data

d. Yield: Revenue per passenger Mile

It measures an average fare paid per mile per one passenger and it is calculated by dividing the revenue per passenger by revenue passenger miles.

e. Revenue per available seat mile (RASM)

RASM measures the amount received for each available seat mile and is divided by available seat miles. This measurement allows comparison among different airlines. In theory, the larger the RASM number, the more profitable the airline.



### 3. Aviation industry

The airline industry is vital to the world's economy with revenue over 750 billions USD, net profit over 19 billion USD in 2014<sup>43</sup> and 3,4% of global GDP is supported by the aviation industry<sup>44</sup>; it works as an important engine for economic growth and linkage in the countries passengers and goods transportation with 8,6 million passengers, 99700 flights and 17,5 billion USD worth of goods carried per day<sup>45</sup>. During last centuries, the airline industry has experienced numerous external business events that have led to bankruptcies, merger and acquisitions but also has reached significant innovation and technological progress. In last decades the number of passenger kilometers<sup>46</sup> has gone from almost nothing to more than 5 trillion per year. Regardless of the numbers mentioned above, the aviation industry is still very vulnerable due to the fluctuation of oil price, accidents and terrorist attacks. Considering the events that occurred just during couples the past several months, the profitability of the industry is quite an accomplishment. Talking about profitability, it is needed to make clear that when it comes to the airline industry, the profit made is around 4-6 USD per passenger carried and in 2013, over 3 billion passengers<sup>47</sup> were carried by the world's airlines. Profitability of the industry is mostly weaker in comparison with other industries due to the fact of being labor intensive (pilots, flight attendants, personnel responsible for baggage handling, ticketing, loading), capital intensive, energy intensive and being highly seasonal. Stability of the profit is therefore low because of the fixed costs and fluctuating passenger loads. Another factor that makes the profit weaker is high level of depreciation and amortization. Based on the study of DBRS<sup>48</sup> the business risk of the airline industry is BB<sup>49</sup> and recognizes the point that the airline industry is one of the industries that is most difficult to operate in.

---

<sup>43</sup> IATA, forecast 2015

<sup>44</sup> ATAG

<sup>45</sup> ATAG

<sup>46</sup> the amount of passengers times the distance that they have traveled

<sup>47</sup> ATAG

<sup>48</sup> DBRS, Rating companies in the airline Industry (October 2011)

<sup>49</sup> the business rating of the airline industry is relatively low

**Table 5: Key metrics**

<i>Airline industry financial ratios in BB rating</i>	
Debt in the capital structure	45% to 60%
EBIT coverage	1,5 to 3
CF to debt	10% to 20%
ROE	5% to 7%

Source: DBRS, Rating companies in the airline industry (2011)

This table shows the key ratios, however we should not expect it to be fully adequate to provide us with full financial risk rating for the company.

**Table 6: Executive summary for year 2014**

<b>Facts Summary for 2014</b>	
Number of passengers	2,97 billion
Passenger kilometres	5,4 trillion km
Number of commercial flights	37,4 million
Number of commercial airlines	1397
Number of airports with commercial flights	3864
Number of commercial aircrafts	25332
Fuel paid by world's airlines	210 billion USD

Source: ATAG, Aviation benefits beyond borders

Profits were not the main concern in the early stages of the industry. Airlines were mostly state owned businesses and air transport was more likely to be a nation's pride. However that soon turned out to be very inefficient. Due to losses, the liberalization of the airline industry started during the 80's and has spread far beyond domestic air travel within each country. The first commercial flight was scheduled in 1914 between St. Petersburg, Florida and Tampa, Florida with a 30 kilometer flight across the bay. Over time, air transport became so common that it would be difficult to live without it. The aviation industry has certainly progressed.

**Table 7: Top oldest airlines**

<b>Top 10 oldest airlines still in operations</b>		
<b>Airline</b>	<b>Year</b>	<b>Country</b>
KLM	1919	The Netherlands
Avianca	1919	Colombia
Qantas	1920	Australia
Aeroflot	1923	Russia
Czech Airlines	1923	Czech Republic
Finnair	1923	Finland
Delta Airlines	1924	USA
Tajik Air	1924	Tajikistan
Air Serbia	1927	Serbia

**Source: ATAG, Aviation benefits beyond borders**

Another issue that airlines have faced from the very beginning is the volatility of fuel prices and low competition from the suppliers. There are two main monopolies – Airbus and Boeing that sell a majority of the aircraft flown by major air carriers. At the same time the industry is exposed to outside climate events and macroeconomics shocks or illnesses that will be described more in detail later in this paper.

The aviation industry is separated into four categories by the American Department of transportation:

- International
- National
- Regional
- Cargo

### 3.1. Global airlines trends

Airline industry is extremely sensitive with regards to the external world. In the last few decades the rapid technological innovation in aviation transport has exceed all other transportation modes.<sup>50</sup> The development of the jet engine has improved efficiency and the power of the airline industry. Being able to reach higher speeds and construct larger aircraft has shifted the industry to a whole new level of transportation. After World War II., came the arrival of the turbo-jet engine (Boeing 747-300 or Airbus A300) that dramatically increased the speed of aircraft even more and it allowed longer flights with no stops.

When it comes to profitability of the airline industry during last few years, it has been marginal. In the other words, airlines still operate on the tightest margin, but the profit is still there. Considering current oil prices, airlines are able to generate profit with the price at 110 USD per barrel<sup>51</sup>. The aviation industry was pushed to be flexible and had learnt difficult ways to adopt efficient processes and carefully managing capabilities and resources. Despite all the efforts, the profitability still balances on the edge and barely covers the cost of capital. The measures of profitability traditionally used in the airline industry are the annual operating profit or loss expressed as a percentage of the total annual operating revenue or the total operating revenue expressed as a percentage of the total operating expenditure – “the revex ratio”<sup>52</sup>.

### 3.2. External events in 21<sup>st</sup> century

This part of the paper will focus on the external environment that might have or had influence on the airline industry. On the global bases, the airline industry has been in a crisis for most of the time in this century. Starting with the terrible event that shaped the start of the 21<sup>st</sup> century: the 9/11 terrorist’ attacks on the American Twin towers in New York and on the Pentagon in Washington in 2001. The air space over North America was closed for five days. This event hit the airline industry hard. However, many airlines, including US Airways were not in the best financial situation before

---

<sup>50</sup> Doganis (2002)

<sup>51</sup> IATA (2014)

<sup>52</sup> Doganis (2002)

9/11, therefore the catastrophe led to layoffs, cutbacks and mergers. In the USA alone, the industry announced net losses of over 40 billion USD in years 2001-2005. During that time, airline labor costs and fuel prices had been increasing faster compared to the general rate of inflation for a couple of years.<sup>53</sup> Even though problems that occurred in the industry cannot be attributed exclusively to 9/11, it was the base for fundamental issues. Airlines had massive cuts and have faced huge uncertainty about the future. In the period after the terrorist attack, industry and passengers went to the slow recovery when the SARS epidemic in East Asia hit in February 2003<sup>54</sup>. SARS demonstrates that loss of confidence and uncertainty lead to a chain reaction in travel sectors, that leads to significant economic damage. The global cost was estimated around 33 billion USD in 2003, where 20 billion USD losses occurred in East Asian countries<sup>55</sup>. The airline industry has achieved slight profitability around 2006 after losses of nearly 33 billion USD in total during 2001 till 2005.

Continuing with the recession in 2008, the airline industry is driven mainly by economic growth and depending on the economic cycle. Therefore during the years 2008 and 2009 the demand in travel industry was very weak and was followed by a sharp decline in the number of passengers. Bad luck is still prominent in the airline industry, as well in 2009, came the outbreak of swine flu. The emergence of this dangerous virus moved prices and caused numerous flights to be cancelled. International air transportation experienced significant decline again, with demand falling by over 11% compared with the previous year<sup>56</sup> and was following with another disaster in 2010, eruption of the Icelandic volcano Eyjafjallajökull<sup>57</sup>. Although the eruption was not huge, it created an enormous cloud of ash moving directly to European skies. The possibility of ash damaging aircraft's engines led to closing of European airspace for almost a week. Based on the estimation of IATA, the revenue loss for airlines could have reached 1,7 billion USD. In 2011 came the earthquake and tsunami in Japan that again shock air travel and slowed the recovery

---

<sup>53</sup> Peter Belobaba, Amedeo Odoni, Cynthia Barnhart (2009)

<sup>54</sup> Economist (2003)

<sup>55</sup> IATA economic reports

<sup>56</sup> IATA

<sup>57</sup> Economist

process from previous events<sup>58</sup>. Global economy faced a lot of obstacles in 2012, including the US Federal Reserve announcing a new round of easing measures to stimulate their economy, that directed US economy almost back to recession and weak growth in major emerging countries. Following with Hurricane Sandy<sup>59</sup> at the end of October 2012 and closing out the year 2014 with several aircraft's crashes in Asia. Three aviation accidents<sup>60</sup> in one year have given the airline industry a big trust issue.

To conclude this part, it is visible that airlines are going through difficult times and they might consider mergers or acquisitions as a means to increase their profitability and financial stability. It gives the opportunity to cut duplicative operating costs, therefore reducing the total costs. It could generate additional revenues by increasing fares, expanding airline networks and by combining routes in order to gain greater market share. Each merger and acquisition has different impacts on the firms due to the depth of cooperation. As an example, when it comes to contracts of employees, changing it could be challenging and costly or integration of aircraft and IT systems as well. The airline industry has faced quite an amount of mergers since deregulation and it has contributed to the constant growth of air travel capacity.

---

<sup>58</sup> The Globe and Mail

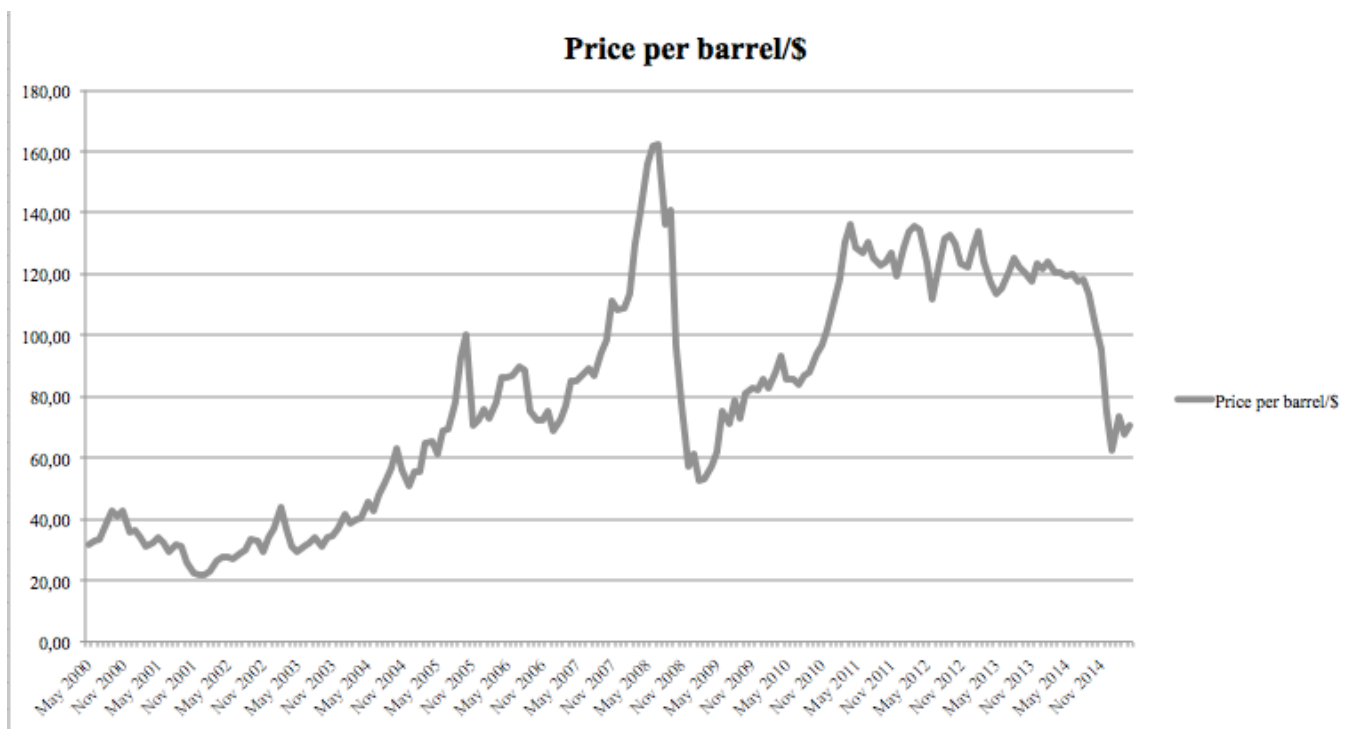
<sup>59</sup> Forbes

<sup>60</sup> Business Insider

### 3.3.Jet fuel prices

Volatility in fuel costs can significantly influence the costs in the airline industry. Airlines have different ways of dealing with increasing price of fuel; some of the short-term tactics are to increase revenue by additional fuel fee or adopting hedging mechanism to manage fuel price risks. Most of the airlines have taken hedging mechanism to protect themselves from the movement of fuel prices, plus additional protection of exchange rate volatility.

**Table 8: Jet Fuel Price Evolution**



Source: Index Mundi

After 9/11 with the falling demand in air travel, fuel prices dropped by 15% from 30,83 USD per barrel to 25,8 USD per barrel in one month. However, it had been steadily increasing after the destruction of the Twin towers and had risen to extreme 160 USD per barrel in June 2008; a six-fold increase compared to 2001. The increase shows the world's economic growth and therefore larger demand for oil. To react to increases of jet fuel prices, airlines could adopt technical modifications and developments to increase their fuel efficiency or apply fuel hedging to manage the risk. Beginning of 2012, jet fuel prices increased due to the lack of supply caused by

sanction on Iran. This fact strongly influences the results of profitability for all selected airlines that we will see later in this paper.

Fuel price hedging could be managed by airlines in several ways:

- a. Forward contracts
- b. Futures contracts
- c. Options, swaps etc.

Based on the IATA forecast, the airlines fuel costs will represent approximately 28% of their total operating expenses. Even though jet fuel prices have fallen continuously in recent years and being such a huge part of a carrier cost, the airlines should definitely improve fuel efficiency, maybe through replacing the old aircraft with better ones.



### 3.4.Airlines

The main reason, the author of this paper has chosen these mergers in particular, was due to the fact that all of the selected airlines were seeking for a merger partner or acquirer because of the financial issues. British Airways, Czech Airlines as well as American Airlines are going through a very rough lapse of time and merging was one of the options to solve and get through the financial instability. Therefore those mergers were more likely to be problem solver for a low profit rather than a focus step to increase a market share, expand into global market or aiming for a special differentiation strategy.

The major advantages of an airline merger:

- Creation of a more convenient access to the company's global network
- Increased number of choices and connectivity
- Employees benefit from being part of a company with a stronger financial base that might create more career opportunities over the time
- Service and flight experience should be improve by combination of experiences
- The value of a single carrier
- Higher competitive advantage against the low cost carrier

#### **3.4.1. British Airways and Iberia merger 2011<sup>61</sup>**

A joint British-Spanish airline, based in London with its registered office in Madrid, was formed in January 2011 by the merger of British Airways and Iberia, creating the International Consolidated Airlines Group, S.A.<sup>62</sup>. However British Airways, Iberia and Vueling operate under separate brand names. On 30<sup>th</sup> July of the same year, British Airways and Iberia announced a merger plan that would lead to the connection of their two airlines to achieve synergy but with retaining their separate names and

---

<sup>61</sup> British Airways website

<sup>62</sup> British Airways website

heritage. The merger would create an airline with more than 400 aircrafts flying to over 200 destinations<sup>63</sup>.

British Airways was formed in the 70's as a result of a merger between British Overseas Airways Corporation and British European Airways. From its very beginning, British Airways was the main airline of the United Kingdom. With regards to Iberia Airlines, it is Spanish largest air transport group and one of three airlines listed on the Dow Jones Stock index. Both British Airways and Iberia were losing money during the beginning of the 21<sup>st</sup> century. The main reason both companies chose to search for a partner in the industry was the economic crisis coming from North America and British Airways was facing tough competition from low cost airlines. Another issue that British Airways was facing was its large pension deficit. However Iberia agreed on having British Airways back and was ready to help to reduce it.

British Airways and Iberia signed a pre-merger contract in November 2009 and in April 2010, the full contract was signed with the aim of completing the agreement by the end of 2010<sup>64</sup>. Under contractual conditions, Iberia took a 45% and British Airways a 55% stake of the company<sup>65</sup>.

The new airline group is currently the third largest in Europe and sixth largest in the world by its revenue, which was over 17 billion USD in 2013<sup>66</sup>. The airlines expect annual synergies of 440 million USD<sup>67</sup> starting in the fifth year of the merger. One of the key benefits of the merger for British Airways was the access to South America. Before the merger British Airways was flying only to Rio de Janeiro, Sao Paulo and Buenos Aires. Simultaneously, Iberia got access to North American destinations

The group has committed to deliver over 400 million EUR in synergies and after one year of progress after the merger, it has led to revision to target even 500 million EUR

---

<sup>63</sup> British Airways website

<sup>64</sup> BBC news

<sup>65</sup> British Airways Annual report

<sup>66</sup> The Guardian

<sup>67</sup> British Airways Annual report

within five years. British Airways has made an operating profit over £900 million<sup>68</sup> in 2014, which is a significant achievement compared to recent last years. Following the merger of American Airlines and US Airways last year, British Airways were able to book over 70 of direct flights a day between United Kingdom and United States<sup>69</sup>. This step also means that the number of flights offered by British Airways and American Airlines between London and New York increased to 17 flights per day.

#### Basis of accounting policies<sup>70</sup>

The financial statements of both firms have been prepared in accordance with IFRS by EU. An important note: British Airways has changed its accounting periods after the merger in 2010, for that reason in terms of year “2010” British Airways is focused mainly on nine months starting from April.

#### **3.4.2. Czech Airlines and Korean Air acquisition in 2013**

Korean Air bought a 44% stake of Czech Airlines in April 2013 from the state after the government had already made several attempts to sell the airline. Czech Airlines is currently owned by two major shareholders, as one of them is Czech Aeroholdings with 56% and Korean Air Lines Co. with already mentioned 44%<sup>71</sup>. Czech Airlines serves as Korean’s subsidiary and Prague airport is Korean Air’s second hub. Although the Czech government still remains the greater part, due to the reason, that non EU airlines are not allowed to buy majority stakes in EU carriers based on the EU regulations, Korean Air is likely to make an influence in the central European field.

Korean Air Lines Co., Ltd. is South Korea’s largest airline and is based in Seoul<sup>72</sup>. It is part of the Hanjin Group conglomerate that also operates in nautical transport, finance and IT. Currently, Korean Air is an innovative leader in the airline industry respected for its above average services that definitely surpass customers’

---

<sup>68</sup> British Airways Annual report 2014

<sup>69</sup> British Airways website

<sup>70</sup> British Airways annual report

<sup>71</sup> Czech Airlines website

<sup>72</sup> Korean Air website

expectations. Korean Air is a main founder of the global airline alliance SkyTeam<sup>73</sup>. The alliance consists of 20 members flying to over 1000 destinations.

Czech Airlines is the national airline of the Czech Republic with its headquarter, in Prague. Czech Airline was founded in 1923 and as it was already mentioned in the previous chapter, belongs to one of the oldest airlines that are still operating. Important changes came in 1989 due to the change of regime in the country, it gave Czech citizens an opportunity to travel outside of the Czech Republic without difficulties in form of visas. Czech Airlines provides flights from Prague and also through Prague to major destinations in Europe, Central Asia and after collaboration with Korean Air, also to Southeast Asia. During the past few years, it has become a modern airline with a number of awards for quality, but as they struggled to deal with an aggressive competition from mainly low-cost airlines and other large carriers such as German's Lufthansa, that takes passengers from the region, the cooperation with Korean Air was a noticeable salvation.

In 2005, Czech Airlines introduced new strategy (OK 2006-2008)<sup>74</sup>, which was a plan to get the company back to a positive point numbers and prepare for privatization. During autumn 2010 Czech government has passed a resolution of creating Czech Aeroholding<sup>75</sup> that would own Czech Airlines as well as the national Prague airport. Therefore, currently Czech Airlines is the subsidiary of Czech Aeroholding, a group of companies that lead the air transportation and related ground handling services in Prague<sup>76</sup>. In March 2012 Korean Air submitted an offer to buy 44% of Czech Airlines for 2,6 million EUR and March 2013 the acquisition became official. The purchase price was based on the last known value of Czech Airlines' shares. In last years, the partnership of the two carriers has already generated several projects that should result into the stronger future revenue.

---

<sup>73</sup> SkyTeam website

<sup>74</sup> Czech Airlines Annual report 2005

<sup>75</sup> Czech Airlines website

<sup>76</sup> Czech Aeroholding owns Prague Airport, air carrier and travel agency Holidays Czech Airlines, Czech Airlines Technics, Czech Airlines Handling and CSA services.

### Basis of accounting policies<sup>77</sup>

The group maintains the official accounting standards in Korean won and prepares its consolidated financial statements in conformity with Korean statutory requirement and fulfill Korean IFRS practices. The same is fulfilled for Czech Airlines that follows Czech accounting standards.

#### **3.4.3. US Airways and American Airlines merger 2013**

American Airlines Group, Inc. was formed December 2013 by the merger of American Airlines and US airways group.<sup>78</sup> American Airlines was founded in 1930 as American Airways and is currently one of the major American airlines. However it had been operating at a loss since 2001 and became the last airline to seek court protection to voluntary fill in for bankruptcy in November, 2011<sup>79</sup>. US Airways is another major American airline that was founded in 1937<sup>80</sup>. During the difficult times, at the beginning of the 2000's, US airways filed for bankruptcy and stayed under Chapter 11 bankruptcy protection for over 3 years<sup>81</sup>. In the beginning of 2012 US airways expressed an interest to merge with American Airlines and in February 2013, both airlines announced the 11 billion USD merger<sup>82</sup>, to create a stronger and probably the largest airline in the US. The connection of US Airways and American Airlines was officially completed by the granting of a common operating certificate by the national aviation authority of the United States – the FAA (Federal Aviation Administration)<sup>83</sup>. The headquarters of the newly created American Airlines Group is in Fort Worth, Texas, US and currently includes over 900 aircraft. Under the terms of the merger, US Airways owns 28% and American Airlines 72% of the combined airline<sup>84</sup>. Due to the reason that the merger was completed on December 9, 2013, American Airlines Group's 2013 results of operations include the results of US

---

<sup>77</sup> Czech airlines annual reports and Korean Air Annual reports

<sup>78</sup> American Airlines website

<sup>79</sup> American Airlines website

<sup>80</sup> US Airways website

<sup>81</sup> Berry, Steven and Panle Jia (2010)

<sup>82</sup> Forbes

<sup>83</sup> American Airlines Annual report 2014

<sup>84</sup> NY Times

Airways for only 23 days for that particular year. The combined airline is carrying the American Airlines name and branding however it maintain the existing US Airways hubs. Even though American Airlines and US Airways have come together as one company, the way to achieve a single operating certificate is, based on experts, expected to take at least 24 months.

In connection with the completion of the merger, the New York Stock Exchange suspended trading of the US Airways Group Common stock, prior to the opening of the market on 9<sup>th</sup> of December 2013.<sup>85</sup> Each share of common stock of US Airways Group was converted into the right to receive one share of American Airlines common stock. The number of stocks of American Airlines issuable to the holders of US airways stocks represented 28% of the equity ownership of the airline<sup>86</sup>.

American Airlines and US Airways are members of the Oneworld alliance<sup>87</sup> that serves nearly 1000 destinations. American Airlines Group provides scheduled passenger, freight and mail service mainly in North America, the Caribbean, Latin America and Pacific. Currently, American Airlines Group is the holding company of American Airlines and US Airways. American Airlines itself, before the merger, has been struggling since 2001. The beginning of 21<sup>st</sup> century presented increasing price of jet fuel and terrorist attack in the east coast of the US.

Beginning of 2014, American Airlines and US Airways started to support the connectivity of their networks by the implementation of a codeshare, providing customers the ability to combine flights easier.

---

<sup>85</sup> American Airlines Annual Report 10K

<sup>86</sup> American Airlines Annual report 2014

<sup>87</sup> One world alliance website

## 4. Ratio Analysis of the airlines

The assessment of the selected airlines' financial performance involves analyzing the short-term profitability and liquidity as well as a long-term solvency.

### Profitability ratios

The changes in fuel prices, the 2007 economic recessions, slowing world economy and the decrease in demand for air transportation in recent years have strongly impacted profitability in the industry. Currently the high jet fuel prices and significant labor cost somehow prevent airlines from generating decent profit. The value of selected profitability ratios in tables bellow, indicate very low profitability in the industry due as already mentioned, to slower growth in air transport demand and increasing expenses. The impact of the economic drop is naturally reflected in the ratio values, when most of the airlines reported financial losses.

As for the return on assets that measures the operating efficiency of assets to generate profit, we can in general notice that selected airlines improved as compared to before and after merger, it shows the capability of airlines to meet the higher traffic demand and give the opportunity to generate more revenue.

### Liquidity ratios

The results of calculations of selected liquidity ratios for six airlines are illustrated in the tables bellow. The analysis shows that the values of the current ratios have been less than 1, except for the case of Spanish Iberia airline, or a little bit above, which could indicate that the firm is not able to generate cash to cover its short-term debts. In summary, the results may indicate that these six airlines are likely to face liquidity issues in the short run as they are vulnerable to diverse economic conditions.

### Solvency ratios

Following tables illustrate the results of debt and coverage ratios computed for six airlines. The results indicate the high leverage, which means that they have significantly higher debt than the company's equity and putting themselves in the

position of solvency risk. The negative amounts of equity in some cases have resulted from the economic crisis. Even though the rule of thumb, that were mentioned in the theoretical part, for debt to equity ratio is around 1,5 to 2,5 or less, given the fact that the debt ratio is industry specific, the above mentioned values are not really applicable for the airline industry. We can see below that for the selected six airlines the ratio on average have range from 4 to even 20. And the main explanation is that airline industry is strongly capital and labor intensive.

The interest coverage shows that on average chosen airlines have been able to cover the interest expenses with earnings before interest and taxes for the last years after merger. However, talking in particular about American Airlines, corporation has been the most vulnerable to risk from the selected carriers.

#### 4.1. British Airways & Iberia

**Table 9: British Airways profitability ratios**

British Airways	2007	2008	2009	2010
ROA	0,0488	0,0787	-0,0210	-0,0216
ROE	0,1261	0,2147	-0,2175	-0,2222
Assets turnover	0,7460	0,7869	0,8574	0,7487
Fixed assets turnover	1,1543	1,2051	1,2432	1,1579
Gross profit margin	0,0720	0,1009	-0,0446	-0,0664

Source: Company's annual reports and own computation

**Table 10: Iberia profitability ratios**

Iberia	2007	2008	2009	2010
ROA	0,0482	-0,0142	-0,0918	-0,0005
ROE	0,1626	0,0205	-0,1764	0,0417
Assets turnover	0,9404	0,9271	0,8385	0,7620
Fixed assets turnover	4,8729	4,6717	4,0449	4,0017
Gross profit margin	0,0808	0,0069	-0,1028	0,0207

Source: Company's annual reports and own computation



**Table 11: Profitability ratios after merger**

BA & Iberia	2010	2011	2012	2013	2014
ROA	0,0324	0,0264	-0,0012	0,0371	0,0588
ROE	0,0840	0,1029	-0,0691	0,1100	0,2491
Assets turnover	0,6119	0,8152	0,9547	0,8988	0,8528
Fixed assets turnover	0,9764	1,6802	1,8252	1,8259	1,7116
Gross profit margin	0,0255	0,0333	-0,0142	0,0261	0,0548

Source: Company's annual reports and own computation

The unexpected recovery after 2010 was for sure a welcome boost for both airlines. Considering the fact, that oil price had changed from \$150 to even \$40 per barrel, we can only imagine how the extreme fluctuation makes gaining profit more complicated. However, after the merger, revenue during the nine months till the end of 2010 increased by 9%<sup>88</sup>.

The fixed asset turnover ratio shows the change in utilization of company's fixed assets. The slight increase is visible through years after merger. When it comes to interpretation of the gross profit margin, we can definitely see the successful improvement after the merger with a hump in 2012. The increase in property, plant and equipment in 2014<sup>89</sup> is mainly related to the investment into aircrafts.

Gross profit margin shows the difference between sales and the cost of sales, therefore it shows profitability of the service before any other expenses are taken into account. The group managed to grow its sales while checking its operating cost with the exception of 2012, when higher operating costs occurred.

British Airways has faced a huge loss during 2009<sup>90</sup> period and the main reasons behind that could be explained by over two weeks strike of a cabin crew due to the pension issues and ash cloud from the volcano explosion in Iceland. The year 2010 luckily brought relief to British Airways by merging with the Spanish airline Iberia, after this merger, British airline came back on track and report profit within six months after the merger.

---

<sup>88</sup> British Airways Annual report 2010

<sup>89</sup> British Airways Annual report 2014

<sup>90</sup> British Airways Annual report 2009

In conclusion with profitability indicators of British Airways group, the results were instable and highly volatile and the reason for that can be significantly explained by the economic recession in 2009 and weak pension plan. The merger with Iberia helped to put the results in line.

**Table 12: British Airways liquidity ratios**

British Airways	2007	2008	2009	2010
Current ratio	0,9465	0,9704	0,5664	0,7150
Quick ratio	0,3771	0,3912	0,2250	0,3436
Cash ratio	0,1967	0,2105	0,0971	0,2102

Source: Company's annual reports and own computation

**Table 13: Iberia liquidity ratios**

Iberia	2007	2008	2009	2010
Current ratio	1,8590	1,3813	1,5224	1,5325
Quick ratio	1,0681	0,5145	0,7737	0,7467
Cash ratio	1,0132	0,2603	0,5026	0,4550

Source: Company's annual reports and own computation

**Table 14: British Airways and Iberia liquidity ratios after merger**

BA & Iberia	2010	2011	2012	2013	2014
Current ratio	0,8001	0,9024	0,6645	0,7236	0,7578
Quick ratio	0,3256	0,4828	0,3320	0,3291	0,2836
Cash ratio	0,2179	0,3028	0,1801	0,1853	0,1559

Source: Company's annual reports and own computation

Regarding liquidity, it is clear that group is suffering from the low liquidity. Measuring current ratio, the current liabilities were exceeding their current assets. Based on their annual reports, airlines spent a lot of their cash on investments; therefore the liquidity was loaded with debt and interest repayments. So all in all, debt can be considered as one of the main issue causing the low profitability.

Going through the tables, its clear that British Airways has low current ratios that is below one, which means that their short-term liabilities exceed their short-term assets. However, looking at cash flow statement might explain better the low liquidity, from the statement we can say that British Airways has been acquiring its first Boeing model B-777 and has been investing heavily into its services, cabin, flight lounges to increase their sustainable competitive advantage to secure their future revenues and that might explain the low liquidity. On the other hand, the main reason that British

Airways was seeking a merging partner, cash flow was attacked by the cash payments to pension schemes, where it spent around £350 million in cash per year in 2011<sup>91</sup>.

To summarize the liquidity part, one can say that British airways suffers from a low liquidity, measured by the ratios, short-term liabilities are constantly higher than their short-term assets. During 2013<sup>92</sup>, British Airways group received an additional source of financing from the issuance of British Airways' Enhanced Equipment Trust Certificates (EETCs). It was the first time the group has used this kind of support and it was used to fund the purchase of six Airbus A320-200s, two Boeings 777-300ERs and six Boeings 787-800s. Due to these facts, even though the group has low liquidity ratios we can see and expect higher future revenue.

Moody's and Standard and Poor's assigned the group the rating of Ba3 and BB and its considered to meet operating requirements for the next 12 months.

**Table 15: British Airways solvency ratios**

British Airways	2007	2008	2009	2010
Debt to equity	3,7217	2,4405	5,2503	4,4767
Debt to capitalization	0,5485	0,4597	0,6513	0,6430
Interest coverage	3,2706	4,9716	-1,3018	-1,6383
Operating CF to debt	0,0843	0,0384	0,0154	0,0387

Source: Company's annual reports and own computation

**Table 16: Iberia solvency ratios**

Iberia	2007	2008	2009	2010
Debt to equity	2,0253	2,6040	2,2578	1,8204
Debt to capitalization	0,1513	0,0475	0,1220	0,0897
Interest coverage	11,32	-1,5385	-11,5750	-0,0882
Operating CF to debt	0,0778	0,0093	-0,0801	0,0374

Source: Company's annual reports and own computation

---

<sup>91</sup> British Airways annual report 2011

<sup>92</sup> British Airways Annual report 2013

**Table 17: British Airways and Iberia solvency ratios after merger**

BA & Iberia	2010	2011	2012	2013	2014
Debt to equity	3,9873	2,6118	5,9739	4,2366	5,6984
Debt to capitalization	0,6197	0,4442	0,6065	0,5371	0,6288
Interest coverage	2,8435	2,3727	-0,0871	2,5581	5,8650
Operating CF to debt	0,0930	0,0547	0,0212	0,0735	0,0938

Source: Company's annual reports and own computation

Financial solvency of both carriers were striking, their interest cover ratio was usually negative and therefore facing a huge risk. From the interest coverage, we can see the great risk of both airlines with their low level of coverage. As we can see in the tables above, positive interest coverage came in 2010 after the merger. The group was able to pay its interest payment by 2,8 times by its current profit and in 2014 even by 5,8. However, the analysis shows, in almost every year, the high long-term debts. It would be highly recommended to focus on lowering the financial debt and therefore lowering the annual losses.

One of the main cost drivers for British airways is the employee cost. As an European airline, it faces higher chances of strike threats considering the salary and that definitely makes British Airways less competitive in the global aviation business. However to conclude the last year of operation for IAG group (British Airways and Iberia), that to be 2014<sup>93</sup>, the revenue has increased by over 7% and operating profit reaching 1390 mil EUR<sup>94</sup> (an increase over 600 mil EUR compared to 2013<sup>95</sup>), the group is advancing its business units to meet their promised financial targets through cost control.

That the group has debt is a pretty clear statement and indeed that will need to be refinanced. The ability to finance ongoing operations and support the growth plans is not an easy plan to follow. However after analyzing the source of debt in the last year, it includes bank debt, export credit agency support, asset backed bonds but mainly operating leases for the aircrafts which is considered as a main revenue driver for the future years.

---

<sup>93</sup> British Airways Annual report 2014

<sup>94</sup> British Airways Annual report 2014

<sup>95</sup> British Airways Annual report 2013

## 4.2.Czech Airlines & Korean Air

**Table 18: Czech Airlines profitability ratios**

Czech Airlines	2008	2009	2010
ROA	0,0668	-0,4453	-0,0529
ROE	4,6535	1,5969	-1,6782
Assets turnover	2,1628	2,4855	2,4940
Fixed assets turnover	5,4465	5,6314	9,8160
Gross profit margin	0,0221	-0,1898	0,0041

Source: Company's annual reports and own computation

From the point of view of the balance sheet during years before 2011, it is visible that the development of the individual items is not heading the right or good direction. Checking more in details the annual reports of Czech Airlines, it is visible that the total assets is decreasing, mainly in year 2009<sup>96</sup>. That drop of total assets is explained by sell out of six aircraft. However the huge financial losses were caused especially by, as numerous mentioned, recession and followed by decrease of price of the tickets<sup>97</sup>.

Low or even negative return on assets is showing extremely low profit and it is a strong indicator that the carrier was facing issues with profitability.

Unfortunately, the data from 2010 onwards are not available due to the reason that Czech Airlines went under holding of Czech Aeroholding that has just consolidated financial reports including all their business.

**Table 19: Korean Air profitability ratios**

Korean Air	2009	2010	2011	2011(cons)	2012	2013	2014
ROA	0,0079	0,0623	0,0195	0,0202	0,0139	-0,0009	0,0168
ROE	-0,0324	0,1318	-0,1377	-0,0719	0,0882	-0,1398	-0,2076
Assets turnover	0,5552	0,6534	0,5838	0,5469	0,5536	0,5169	0,5064
Fixed assets turnover	0,8041	0,9506	0,8535	0,8630	0,8548	0,7642	0,7548
Gross profit margin	-0,0133	0,0527	-0,0375	-0,0220	0,0340	-0,0397	-0,0238

Source: Company's annual reports and own computation

<sup>96</sup> Czech Airlines annual report 2009

<sup>97</sup> IDNES.cz

The year 2011 produced quite a slow growth in the Asian air travel industry due to the huge impact of the Japanese earthquake and nuclear catastrophe. When comparing the numbers in year 2011 and 2012 were similar. In 2011, Korean Air concentrated on overseas expansion of a global network and strong marketing campaigns. They increased a capacity of high profit routes and on the other hand they decreased a capacity on low profitable routes. Despite the difficult business environment, revenues from passengers' business rose in the last year. They concentrated on improving profits by adjusting elastic supply after analyzing the changes in demand in air travel.

**Table 20: Czech Airlines liquidity ratios**

Czech Airlines	2008	2009	2010
Current ratio	0,8979	0,5141	1,0697
Quick ratio	0,8061	0,4533	1,0634
Cash ratio	0,0960	0,0892	0,4295

Source: Company's annual reports and own computation

During all three years before becoming a part of Czech Aeroholding, Czech Airlines had lower indicators of liquidity ratio than it is recommended. That is result of high amount of current liabilities and gradual decrease of total assets.

**Table 21: Korean Air liquidity ratios**

Korean Air	2009	2010	2011	2011(cons)	2012	2013	2014
Current ratio	0,5410	0,3934	0,4632	0,5057	0,5421	0,4046	0,6650
Quick ratio	0,3437	0,2599	0,3493	0,3635	0,3714	0,2755	0,2430
Cash ratio	0,1552	0,1200	0,2117	0,2211	0,2360	0,1451	0,1070

Source: Company's annual reports and own computation

It is visible that Korean Air has low current ratios, below one, which means that their short-term liabilities exceed their short-term assets. Results indicate that the company may have difficulties meeting their current obligations. Fortunately, low values do not indicate a critical problem, if Korean Air has good long term investments, it is able to borrow against those to meet their current obligations. During the selected period the highest current ratio was 0,66 in the previous year and lowest was 0,39 in 2010. The low quick ratio indicates that the company is not able to fully pay back its current liabilities.

**Table 22: Czech Airlines solvency ratios**

Czech Airlines	2008	2009	2010
Debt to equity	83,9010	-3,6798	12,2234
Debt to capitalization	0,6245	-0,0257	0,1276
Interest coverage	25,7778	-44,7975	-5,0870
Operating CF to debt	-0,2079	-0,3542	-0,2622

Source: Company's annual reports and own computation

The Airline is mostly financed from the current liabilities, therefore the solvency risk is very high and due to the operating loss, Czech Airlines interest coverage is in negative numbers from 2009 onwards. Huge increase in debt to equity ratio in 2010 shows a strong and aggressive financing with debt.

Results of the analysis for Czech airlines show that the carrier is in a very risky and not profitable situation. In 2009<sup>98</sup>, the company almost faced the bankruptcy due to the great operating loss and negative shareholders' equity. Another reason for instability is negative operating cash flow in all three years of the analysis and high amount of debt in form of current liabilities and accepting a loan from the Ministry of Industry and Trade.

**Table 23: Korean Air solvency ratios**

Korean Air	2009	2010	2011	2011(cons)	2012	2013	2014
Debt to equity	4,5346	4,3730	8,2507	7,0878	6,9108	7,3650	9,6611
Debt to capitalization	0,4043	0,2648	0,3243	0,4538	0,4125	0,3081	0,4212
Interest coverage	0,2745	1,9628	0,7928	0,6295	0,5266	-0,0371	0,8298
Operating CF to debt	-0,0085	0,2010	0,1009	0,1023	0,1149	0,0966	0,0876

Source: Company's annual reports and own computation

In 2012<sup>99</sup>, liabilities rose by 1,5% but the debt ratio had fallen. This is mainly attribute of raise in equity. When it comes to cash flow in this year, it went up by almost 300 billion KRW. That was the result of an increase in net income.

A high debt to equity ratio shows that Korean Air has been aggressively financing its growth with debt. This usually leads to additional interest expenses. When it comes to the interest coverage, the highest coverage was 1,96 in 2010 and lowest -0,03 in 2013.

<sup>98</sup> Czech Airlines Annual report 2009

<sup>99</sup> Korean Air Annual report 2012

Usually when the ratio is less than 2, the firm is burdened in debt. However, beginning of 2015, Korean Air announced that they have a possibility to cut debt by more than 200%<sup>100</sup> if the company completes its proposed share sale, according to Korea Investor Service. The carrier is planning to offer over 14 million of new shares to gain approximately \$400 million<sup>101</sup>. Thanks to this deal, the airline has a huge possibility to reduce its debt ratio.

---

<sup>100</sup> Korean Air Annual report 2014

<sup>101</sup> Korean Air Annual report 2014



### 4.3.American Airlines & US Airways

**Table 24: American Airlines profitability ratios**

American Airlines	2010	2011	2012	2013	2014
ROA	0,0123	-0,0435	0,0064	0,0331	0,0971
ROE	0,1194	0,2783	0,2349	0,6715	1,4260
Assets turnover	0,8837	1,0055	1,4973	0,6326	0,9744
Fixed assets turnover	1,4941	1,6761	2,6007	1,3886	1,8476
Gross profit margin	-0,0228	-0,0825	-0,0701	-0,0815	0,0753

Source: Company's annual reports and own computation

The loss in 2010 was mainly driven by the decrease in the air travel industry as a result of the economic recession, leading to decrease of number of airlines' customers. American Airlines has also difficulties to hedge the jet fuel price due to their lower credit rating. Due to the lack of the a credit reliability, volatility in the fuel price can strongly impact the airline financial position. Airlines American Airlines Group has a positive gross profit margin in 2014 and it is a first step for a company to make a net profit. During the selected period the highest Return on Assets was 9,7% and the lowest was -4,35%. It is also important to notice, that in 2011, special cost of \$725 million related to the impairment of aircrafts and gates<sup>102</sup>, in 2013 it was \$449 million related to premerger expenses<sup>103</sup> and in 2014, special costs times occurred, such as \$818 million<sup>104</sup> for expenses on merger or alignment of labor union contracts.

**Table 25: US Airways profitability ratios**

US Airways	2010	2011	2012
ROA	0,0999	0,0511	0,0911
ROE	5,9762	0,4733	0,8063
Assets turnover	1,5230	1,5663	1,4720
Fixed assets turnover	2,3349	2,3102	2,1487
Gross profit margin	0,0422	0,0069	0,0461

Source: Company's annual reports and own computation

<sup>102</sup> American Airlines Annual report 2011

<sup>103</sup> American Airlines Annual report 2013

<sup>104</sup> American Airlines Annual report 2014

As mentioned already in the previous chapter US Airways financial reports are available just until year 2012 due to the connection of the completion of the merger, the New York Stock Exchange suspended trading of the US Airways Group Common stock and therefore the data from 2013 onwards are not publicly available<sup>105</sup>. As a general trend after 2009, there has occurred an improvement in the profitability of the industry. However American Airlines continued to incur losses, especially in profit margin. As a result, by the end of 2011 American Airlines was forced to file for bankruptcy protection under Chapter 11 of US bankruptcy code due to the fact that it was not able to reach its short and long-term commitment<sup>106</sup>.

In 2014, the American Airlines still experience year-over-year growth in passenger revenue<sup>107</sup> driven by a quite strong demand for air travel and the industry is benefiting from a significantly reduced jet fuel price. However American Airlines Group is fully exposed to fluctuations<sup>108</sup> in fuel prices due to the fact that they sold out their fuel hedging contracts in the middle of 2014 and has not entered into any transactions since then<sup>109</sup>.

**Table 26: American Airlines liquidity ratios**

American Airlines	2010	2011	2012	2013	2014
Current ratio	0,7788	0,7830	0,7848	1,0374	0,9015
Quick ratio	0,1032	0,2453	0,2723	0,2705	0,2634
Cash ratio	0,0191	0,1408	0,1476	0,1575	0,1316

Source: Company's annual reports and own computation

Looking at the American Airlines current ratio in 2014 of 0,90. It indicates that the company may have difficulty meeting its current obligations, however it does not indicate a critical problem. During the selected period, American Airlines highest current ratio was 1,03 and lowest 0,77. The airline's quick ratio also indicates no capability of immediate full payback of its current liabilities.

---

<sup>105</sup> American Airlines Financial report 2013

<sup>106</sup> American Airlines website

<sup>107</sup> US Airways Annual report 2014

<sup>108</sup> US Airways Annual report 2014

<sup>109</sup> US Airways Annual report 2014

**Table 27: US Airways liquidity ratios**

US Airways	2010	2011	2012
Current ratio	1,0243	0,9649	1,0845
Quick ratio	0,7641	0,7196	0,7793
Cash ratio	0,6546	0,6161	0,6891

Source: Company's annual reports and own computation

Over \$656 million of short term investment was held in Venezuelan bolivars by the end of 2014<sup>110</sup>. Operating a global business with international operations that are subject to economic and political conditions in instability has been unfortunately beyond the airlines control. However, the group managed to utilize cash generated from operations to pay down higher rate debt and lease obligations.

If we would not consider account receivables, we arrive to a stricter ratio, cash ratio, which consider cash, cash equivalents and short term investments, the closer to 1 the cash ratio is, the better the airline is able to meet their short-term obligations. For the selected period, the range is of 0,01 – 0,68. Here, we can see, that American Airlines had very low cash ratio and the airline eventually filed for bankruptcy protection in late 2011 because it was not able to meet even its short-term commitments. Lastly, it is clear that both airlines do not generate enough cash flow from operating activities to cover major part of the current liabilities.

**Table 28: American Airlines solvency ratios**

American Airlines	2010	2011	2012	2013	2014
Debt to equity	-5,0139	-4,3537	-3,1164	-16,4808	20,6581
Debt to capitalization	1,8200	-16,3863	-8,1699	1,2164	0,8891
Interest coverage	0,3742	-1,2787	0,2342	1,6343	4,7903
Operating CF to debt	0,0627	0,0240	0,0516	0,0150	0,0738

Source: Company's annual reports and own computation

Huge increase in debt to equity ratio shows a strong and aggressive financing with debt. In October 2014, the group borrowed \$750 million due in 2021<sup>111</sup>. From selected period, 2014 is the first year that was not with a negative number. American

<sup>110</sup> US Airways Annual report 2014

<sup>111</sup> American Airlines Annual report 2014

Airlines also recognized less interest expenses in 2014 as compared to the 2013 period<sup>112</sup>.

**Table 29: US Airways solvency ratios**

US Airways	2010	2011	2012
Debt to equity	92,083	54,567	10,894
Debt to capitalization	0,979	0,965	0,847
Interest coverage	2,374	1,303	2,496
Operating CF to debt	0,104	0,058	0,118

Source: Company's annual reports and own computation

US Airways group portion of long term-debt for the September 2013 was around \$405 million. A high debt to equity ratio, as mention before, means that a company has strongly financed its growth with debts. The low number of airlines' stockholder equity had essentially resulted from previous years financial losses including the years that airlines went through the economic recession. It is clear that ratios for selected airlines have huge range and that is due to the fact that airline industry is capital and also labor intensive.

---

<sup>112</sup> American Airlines Annual report 2014

## 5. Measurement in the airline business

The markets in which airlines operates are highly competitive. Direct competition is faced from other airlines, as well as from indirect flights and other form of transportations. Understanding the profitability of an airline business must be broader than looking just at the balance sheet or profit and loss account. It is therefore important to have a look at different measurements that might give us a different perspective of view on the profitability of the industry and it is needed to rationalize the current fiercely competitive market conditions. Therefore, in this chapter we will have a look at the special measurements that are specific for the airline industry.

### 5.1. British Airways & Iberia

British Airways (km)	2007	2008	2009	2010
ASM/ASK	148321	149576	148504	141178
RPM/RPK	112851	118395	114346	110851
Load Factor	76%	79%	77%	78,50%
RASM/RASK	4,9	5,08	5,28	4,49
CASM/CASK				
British Airways (km)	2011	2012	2013	2014
ASM/ASK	150152	158247	161444	170917
RPM/RPK	117348	126436	131333	138431
Load Factor	78,20%	79,90%	81,30%	81%
RASM/RASK	5,81	6	6,27	6,12
CASM/CASK	4,14	4,32	4,35	4,23

Source: Company's annual reports

Analyzing the years after merger, it is visible that the capacity (ASKs) has been constantly increasing and by the end of 2014 a reported increase reached over 5% and RPKs increased around the same amount, even though the load factor had decreased by 0,3 percentage points.

<b>IBERIA (km)</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
ASM/ASK	66454	66098	62158	62312
RPM/RPK	54229	52885	49612	51242
Load Factor	81,6%	80%	79,8%	82,20%
RASM/RASK	6,07	5,89	5,05	5,38
<b>IBERIA (km)</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
ASM/ASK	63042	60863	52427	54321
RPM/RPK	51268	49614	41499	42690
Load Factor	81,30%	81,50%	79,20%	79%
RASM/RASK	5,26	5,46	5,58	5,41

Source: Company's annual reports

All in all, year 2014 turned out to be good for the airline group and a major point was the continuing transformation of both airlines return to profitability a position that in 2012 looked like a very difficulty and impossible project. Although there is no limit when it comes to boosting the profitability, from 2013 onwards we can see the constant and stability in all measurements and ratios, providing a stable financial base. The improvement during last five years is basically shown in significant increase of capacity related to new aircraft and fuel cost reduction by hedging.

## 5.2.Korean Air

<b>Korean Air</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
ASM/ASK	78941	79511	84285	88305	89110	90979
RPM/RPK	55127	60528	64857	68834	68361	67948
Load Factor	65,40%	76,10%	76,90%	78%	72,90%	71,90%

Source: Company's annual reports

Looking at the measurements from the Korean air perspective, there have been numerous synergic effects resulting from them joining the Czech Airlines' carrier. Considering the last year, even though the demand decrease due to the low season, Sewol ferry disaster contributed to the growth of air travel demand.

Looking back at 2013, the aviation industry faced again a great amount of challenges due to not stable political developments on the Korean peninsula, increasing jet oil price and especially the Won's appreciation against Japanese Yen. However it was marked as accident free for fifteenth year and was ranked as a top global airline when it comes to customer satisfaction index. Its close partnership with Czech Airlines

helped Korean Air to gain sustainable advantage in the European market but still having a focus on its Asian network. Based on the basic airlines' measurement we can see that the airline industry has an explosive growth in the number of passengers every year and the expected number of passengers in the future is even higher due to the 2018 Winter Olympics in Pyeongchang. In 2014, demand for travel grew thanks to the introduction of a new substitute holiday system in South Korea and a stronger Won. The volume of Korean Air's total international traffic decreased by 1% compared with the year 2013.

Unfortunately, the basic measurements data were not available for Czech Airlines. However if we check the annual report for the number employees, the number decrease over 60% in 2010 compared to 2007<sup>113</sup> and that led to huge cut of expenses. On the other hand, the number of passengers is constantly decreasing (from over 5 million to 4 million)<sup>114</sup>, caused by selling out of some aircrafts and decreasing demand of air travel due to economic recession. All in all, it goes hand in hand with financial ratios mentioned in the previous chapter where we can see below an average liquidity ratios, a great solvency risk and a very low profitability; the airline is facing a difficult time to reach profitability.

Therefore the sell out of 44% of the Czech Airlines share to Korean Air was definitely a smart move to keep an airline with a long tradition and save it from bankruptcy. Thanks to this arrangement, Czech Airlines received on lease the Airbus A330-300 from Korean Air<sup>115</sup>, and is now capable to handle long-haul flights with a regular schedule to Seoul. This represents huge increase in capacity of Czech Airlines and can be alone considered as a great success due to the financial instability in years before. By introducing the Prague – Seoul route, Czech Airlines was able to enter the new Asian market, offering more summer vacation destinations, even to the Pacific region. In less than a year after the acquisition, Czech Airlines can offer long haul flights to additional 40 destinations<sup>116</sup>.

---

<sup>113</sup> Czech Airlines Annual report 2007, Czech Airlines Annual report 2010

<sup>114</sup> Czech Airlines Annual report 2007, Czech Airlines Annual report 2010

<sup>115</sup> Korean Air Annual report 2013

<sup>116</sup> CSA website

### 5.3.American Airlines & US Airways

American Airlines (miles)	2009	2010	2011	2012	2013	2014
ASM/ASK	151587	153052	154160	152478	154351	157428
RPM/RPK	122304	125370	126371	126296	128300	129217
Load Factor	80,68%	81,91%	81,97%	82,8%	83,12%	82,08%

Source: Company's annual reports

Air transport volume is gradually increasing. In addition, latest improvements in business should support the growth in international transportation. Carriers in all regions have experienced capacity expansion in recent years meaning, that the demand is still consistent.

US Airways (miles)	2009	2010	2011	2012	2013	2014
ASM/ASK	70668	71540	72558	74165	77838	79867
RPM/RPK	57841	58935	60740	62399	66118	66265
Load Factor	81,85%	82,38%	83,71%	84,1%	84,94%	82,97%

Source: Company's annual reports

Total capacity for both carriers increased in 2014 as compare to 2013 period, primarily due to more aircrafts. Mainline passenger revenues increased in 2013 from 2012 as well as in 2014 from the 2013 period, which was driven by strong demand for air travel, higher yields and ASMs, offset in part by slightly lower load factors.

The group has taken significant actions to restore their competitiveness and to integrate, even though it is difficult to predict the price of oil or the strength of the economy, the ratios in year 2014 and the airline measurements are evidence of the substantial progress. Thanks to the merger, the group has created more convenient access to the combined company's network and global access to the one of the strongest airline alliance Oneworld. This merger is the better outcome for the company, delivering not just greater value to the stakeholders but also putting the group in a position of gaining sustainable competitive advantage over the long term. This deal created one of the world's largest carrier although they have a long way to go to integrate their systems, operations and workforce.



In addition, the airline industry is still highly competitive and based on the IATA statistics, the strongest financial performance is being delivered by airlines in North America even though US passenger yields have been showing decline during recent months. Based on IATA statistics, US passenger yields were down by 5% compared to last year. This recent drop might reflect downward pressure from earlier declines in jet fuel related expenses.

## Conclusion

Examining the airline industry based on these selected carriers underline the challenges that airlines are facing. We can see the strong impact of the economic crisis and natural disasters that occurred during last couple of years for airlines to generate higher profit. Nevertheless, since 2013 the global economy has begun to recover from the consequences of the whole recession. However, considering the use of traditional ratio of selected airlines, we can see that existing rules of thumb is not really applicable to the airline business due to the industry specificity. The analysis has shown that during the last years, airlines have been in general working with negative numbers, which indicates that they are likely to face solvency and liquidity risk in the short run and on top of that the profitability ratios have not shown any better results in the past years.

Furthermore, looking more specific at the industry, we can generally say that the mergers of Iberia and British Airways as well as Czech Airlines and Korean Air, and hopefully American Airlines and US Airways created a stronger and more competitive airline, that gives better service to customers and that is how the business is done. The larger network gives greater choice at more competitive prices. The new corporate structures ensured that the airlines work as part of a strong group. The airline industry is clearly in a much better place nowadays than it has been in couple years ago. Based on the International Air Transport Association, the whole industry gain net profit of almost \$20 billion in 2014 and its expected to get \$25 billion in 2015. The positive changes includes most of the airlines and most of them are undertaking multi-year programs that aims to reduces costs to decent level in the long term. Iberia has launched a plan called “*Plan de Futuro*” that initiates plan for 30 key areas of the airline<sup>117</sup>.

In case of British Airways, even though the merger helped to overcome the instability of revenue, it should focus on gathering other alternative source of revenue to stabilize the operating cost and head to higher profits. As an example, British Airways

---

<sup>117</sup> Iberia website

might consider focusing more on supporting services that goes beyond their standard services. Another recommendation, for all selected airlines, should be optimizing costs. In order to support higher profit, the airlines might use the value chain to identify cost reduction potential or to select the most promising differentiation variables for the firm to create a strong competitive advantage leading to high revenues.

In case of Korean Air acquiring Czech airlines, it is clear that it helped to stabilize the Czech carrier, getting high valued Korean know-how and better usage of the airline capacity that should be counted as the major synergy effect for the airline. And the major aim of Korean Air was to build a strong European hub for Asian travelers flying to Europe.

Getting to the conclusion, the ratio tables provide evidence of a light impact of merger on selected carriers, however the traditional ratios turn out to be most of the time negative and show huge solvency and liquidity risk and low profitability. Therefore it is important to have a look at the other possible measurements of the airline industry profitability, in case of this paper it is passenger capacity and transport volumes, that might show different angle of the analysis for having a more comprehensive overview on the selected airline.

To answer the questions that were given at the beginning of this paper, one can say that the traditional ratios provide an overall overview for the selected airlines. Even though the financial indicators were most of the time in negative numbers, which indicates high risk of solvency and great liquidity and low profitability, as we can see, the carriers still find the sufficient way to operate. Looking at the traditional financial analysis, it is clear that it is not enough to analyze the airline industry due to its specific business conditions and therefore other measurement of the profitability is needed. Looking overall on the merger topic from the top, it is clear that the airline industry is very dependent on alliances and none of the selected airlines is an exception to this. Maintaining a leading position and ensuring the good performance in this industry in particular, require strong connection, collaboration and cooperation among the airlines and so it is possible to say, that merger helps the carriers to keep the stability.

## References:

- Airbus (2015) Global Market Forecast. Flying on Demand 2014–2033., Available at: <http://www.airbus.com/company/market/forecast/> (Accessed: 3rd July 2015).
- Airline Leader (2015) Reshaping the Airline Industry: In search for new business models. Airline Leader (23). Center for Aviation (eds.), Available at: <http://www.airlineleader.com/issues/issue-23> (Accessed: 2nd June 2015).
- American Airlines (2015) Annual reports, Available at: <http://phx.corporate-ir.net/phoenix.zhtml?c=117098&p=irol-reportsannual> (Accessed: 15th July).
- American Airlines (2015) BASIC MEASUREMENTS IN THE AIRLINE BUSINESS, Available at: <http://www.aa.com/i18n/amrcorp/corporateInformation/facts/measurements.jsp> (Accessed: 13th May 2015).
- American Airlines (2015) Building a stronger American, Available at: <https://www.aa.com/i18n/aboutUs/arriving.jsp> (Accessed: 26th July 2015).
- Andrew J. Sherman, Milledge A. Hart (2006) *Mergers and Acquisitions from A to Z*, 2nd edition edn., New York: AMACOM Div American Mgmt Assn.
- ATAG (2015) About Us, Available at: <http://www.atag.org/about-us/who-we-are.html> (Accessed: 21st May 2015).
- ATAG (2015) Facts & Figures, Available at: <http://www.atag.org/facts-and-figures.html> (Accessed: 21st May 2015).
- BBC (2015) BA and Iberia agree merger deal, Available at: <http://news.bbc.co.uk/2/hi/business/8356780.stm> (Accessed: 15th June).
- Berry, Steven, and Panle Jia. (2010). "Tracing the Woes: An Empirical Analysis of the Airline Industry." *American Economic Journal: Microeconomics*, 2(3): 1-43.
- Blank, C. Demand Media (s. f.) (2015) The Advantages & Disadvantages of the Acquisition of Another Company in the Same Industry, Available at: <http://smallbusiness.chron.com/advantages-disadvantages-acquisition-another-company-same-industry-31362.html> (Accessed: 5th April 2015).
- Bloomberg (2015) Korean Air May Reduce Debt Ratio to 596% From 809% on Share Sale, Available at: <http://www.bloomberg.com/news/articles/2015-01-08/korean-air-may-reduce-debt-ratio-to-596-from-809-on-share-sale> (Accessed: 21st July 2015).

Boeing (2015) Current Market Outlook 2013 – 2032, Available at:[http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing\\_Current\\_Market\\_Outlook\\_2013.pdf](http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing_Current_Market_Outlook_2013.pdf) (Accessed: 16th May 2015).

Boeing (2015) Current Market Outlook 2014 – 2033, Available at:[http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing\\_Current\\_Market\\_Outlook\\_2014.pdf](http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing_Current_Market_Outlook_2014.pdf) (Accessed: 16th May 2015).

Bohlin, N., Daley, E. y Thomson, S. (s. f.) (2015) Successful Post-Merger Integration: Realizing the Synergies. Institute of Mergers, Acquisitions and Alliances , Available at: [http://www.imaa-institute.org/docs/m&a/adlittle\\_02\\_Successful%20Post-Merger%20Integration%20-%20Realising%20the%20Synergies.pdf](http://www.imaa-institute.org/docs/m&a/adlittle_02_Successful%20Post-Merger%20Integration%20-%20Realising%20the%20Synergies.pdf) (Accessed: 26th May 2015).

British Airways (2015) Stronger together - British Airways and Iberia, Available at:<http://www.britishairways.com/en-gb/information/about-ba/iag> (Accessed: 26th June 2015).

Business Insider (2014) If The Missing AirAsia Plane Crashed, 2014 Was One Of The Deadliest Years In Aviation In Almost A Decade, Available at:<http://uk.businessinsider.com/if-the-missing-airasia-plane-crashed-2014-was-one-of-the-deadliest-years-in-aviation-in-almost-a-decade-2014-12?r=US&IR=T> (Accessed: 14th June 2015).

By Pamela P. Peterson, Frank J. Fabozzi (n.d.) Analysis of Financial Statements.[Online]. Available at: <https://books.google.de/books?id=QHEXzQFp92EC&printsec=frontcover&dq=how+to+do+financial+analysis&hl=en&sa=X&ved=0CEAQ6AEwAmoVChMIme3Y2amAxwIVxP8sCh1fSAAtl#v=onepage&q=how%20to%20do%20financial%20analysis&f=false> (Accessed: 3rd April 2015).

Centre for aviation (2011) British Airways and Iberia merger completed; plan to add more airlines to group, Available at: <http://centreforaviation.com/analysis/british-airways-and-iberia-merger-completed-planning-to-add-more-airlines-to-the-group-44282> (Accessed: 26th June 2015).

Centre for aviation (2013) Korean Air sees success from CSA Czech Airlines acquisition while growing its Etihad partnership, Available at:<http://centreforaviation.com/analysis/korean-air-sees-success-from-csa-czech-airlines-acquisition-while-growing-its-etihad-partnership-138069> (Accessed: 22nd June 2015).

Clifford Winston (2013) The American Airlines-US Airways Merger in an Evolving Airline Industry, Available at: <http://www.brookings.edu/research/testimony/2013/02/26-airline-merger-winston> (Accessed: 22nd May 2015).

CSA (2015) CSA Annual reports, Available at: <http://www.csa.cz/en/portal/quicklinks/news/vyrocnizpravy.htm> (Accessed: 2nd July 2015).

DBRS (2015) Rating Companies in the Airline Industry., Available at:<http://www.dbrs.com/research/259995/rating-companies-in-the-airline-industry.pdf>(Accessed: 27th May 2015).

Dennis Carey, Robert J. Aiello, Michael D. Watkins, Robert G. Eccles, Alfred Rappaport (2001) *Harvard Business Review on Mergers and Acquisitions*, : Harvard Business School Press.

E. Han kim, Vijay Singal (1993) 'Mergers and Market power: Evidence from the Airline industry', *The American Economic Review*, 83(3), pp. 549-569.

Economist (2003) Painful side-effects, Available at:<http://www.economist.com/node/1747241> (Accessed: 19th May 2015).

Economist (2010) Volcanic fallout, Available at:<http://www.economist.com/blogs/freeexchange/2010/04/eyjafjallajokull> (Accessed: 14th June 2015).

Economist (2015) A big win for American, British Airways alliance, Available at: [http://www.economist.com/blogs/gulliver/2010/02/antitrust\\_immunity\\_oneworld](http://www.economist.com/blogs/gulliver/2010/02/antitrust_immunity_oneworld) (Accessed: 21st May 2015).

Economist (2015) A new start, and an old problem, for BA, Available at:[http://www.economist.com/blogs/gulliver/2011/01/british\\_airways](http://www.economist.com/blogs/gulliver/2011/01/british_airways) (Accessed: 21st May 2015).

Economist (2015) American Airlines and US Airways: Sense prevails, Available at:<http://www.economist.com/blogs/schumpeter/2013/11/american-airlines-and-us-airways>(Accessed: 26th June 2015).

Economist (2015) In which British Airways buys a money-losing airline to the detriment of its own passengers, Available at:<http://www.economist.com/blogs/gulliver/2012/04/ba-and-bmi> (Accessed: 21st May 2015).

Economist (2015) Paella in the sky (2007), Available at: <http://www.economist.com/node/9080072> (Accessed: 21st May 2015).

Economist (2015) The last great American airline merger, Available at:<http://www.economist.com/news/business/21569454-and-last-great-american-airline-bankruptcy-last-great-american-airline-merger> (Accessed: 26th June 2015).

Economy watch (2010) History of Mergers and Acquisitions, Available at:<http://www.economywatch.com/mergers-acquisitions/history.html> (Accessed: 22nd February 2015).

Edwin L., Jr. Miller (2008) Mergers and Acquisitions: A Step-by-Step Legal and Practical Guide, : Wiley.

Forbes (2012) Airlines Pay the Price of Hurricane Sandy, Available at:<http://www.forbes.com/sites/tedreed/2012/11/27/airlines-pay-the-price-of-hurricane-sandy/> (Accessed: 2nd June 2015).

Forbes (2013) Big Deal: Reflections on the American and US Airways Megamerger, Available at: <http://www.forbes.com/sites/hbsworkingknowledge/2013/02/19/big-deal-reflections-on-the-american-and-us-airways-megamerger/> (Accessed: 3rd June 2015).

Forbes (2015) American-US Airways Integration On Track, Available at:<http://www.forbes.com/sites/greatspeculations/2015/04/02/american-us-airways-integration-on-track/> (Accessed: 15th July 2015).

GRÜNWALD, R.; KORBOVÁ, R.(2007): Finanční analýza a plánování podniku. Sbírka neřešených příkladů. Praha, Oeconomica,

Hansson, T., Neilson, G. y Belin, S. (2001). (2015) Airline Merger Integration. Take-Off Checklist., Available at:[http://pages.stern.nyu.edu/~igiddy/mergerdocuments/airline\\_merger\\_integration.pdf](http://pages.stern.nyu.edu/~igiddy/mergerdocuments/airline_merger_integration.pdf)(Accessed: 3rd June 2015).

IAG (2015) Annual reports, Available at: <http://www.iairgroup.com/phoenix.zhtml?c=240949&p=irol-reportsannual> (Accessed: 5th July 2015).

IATA (2014) Economic performance of the airline industry , Available at:<https://www.iata.org/whatwedo/Documents/economics/Economic-Performance-of-the-Airline-Industry-end-year-2014-slides.pdf> (Accessed: 12th June 2015).

IATA (2015) Financial Forecast , Available at: <https://www.iata.org/publications/economics/Pages/fharchives.aspx> (Accessed: 12th July 2015).

IATA (2015) Financial Forecast , Available at:<https://www.iata.org/whatwedo/Documents/economics/Central-forecast-Dec-2014-Figures.pdf> (Accessed: 12th July 2015).

IATA (2015) Jet Fuel Price, Available at:<http://www.iata.org/publications/economics/fuel-monitor/Pages/index.aspx> (Accessed: 17th July 2015).

iDnes.cz (2010) Ucet za rok 2009, Available at: [http://ekonomika.idnes.cz/ucet-za-rok-2009-v-csa-ztrata-10-milionu-kazdy-den-fas-/ekoakcie.aspx?c=A100628\\_133615\\_ekoakcie\\_fih](http://ekonomika.idnes.cz/ucet-za-rok-2009-v-csa-ztrata-10-milionu-kazdy-den-fas-/ekoakcie.aspx?c=A100628_133615_ekoakcie_fih) (Accessed: 3rd June 2015).

Index Mundi (2015) Jet Fuel, Available at: <http://www.indexmundi.com/commodities/?commodity=jet-fuel&months=180> (Accessed: 22nd June).

Investopedia(2015) *Merger*, Available at: <http://www.investopedia.com/terms/m/merger.asp> (Accessed: 15th January 2015).

John R. Graham (2012) *Introduction to corporate finance*, Australia: South-Western/Cengage Learning.

Kang, N. and S. Johansson (2000), “Cross-Border Mergers and Acquisitions: Their Role in Industrial Globalisation”, OECD Science, Technology and Industry Working Papers, 2000/01, OECD Publishing. <http://dx.doi.org/10.1787/137157251088>

Korean Air (2015) Financial Statements, Available at: [https://www.koreanair.com/global/en/about/economic-responsibility-investor-relations/investor-relations/annual\\_reports.html](https://www.koreanair.com/global/en/about/economic-responsibility-investor-relations/investor-relations/annual_reports.html) (Accessed: 2nd July 2015).

Leo Troy (2005) *Almanac of Business and Industrial Financial Ratios*, 36th edn., Prentice Hall: CCH Incorporated Chicago.

Leo Troy (2008) *Almanac of Business and Industrial Financial Ratios*, 40th edn., : CCH.

M. S. Vassiliou (2009) *The A to Z of the Petroleum Industry*, : Scarecrow Press.

MAREK, P (2009).: *Studijní průvodce financemi podniku*. Praha, Ekopress,

Marion Nestle (2013) *Food Politics: How the Food Industry Influences Nutrition and Health*, : University of California Press.

Martin S. Fridson (1996) *Financial statement analysis*, 2nd edn., : Wiley.

Max M. Habeck, Fritz Kröger, Michael Träm (2000) *After the Merger: Seven Strategies for Successful Post-merger Integration*, : Financial Times/Prentice Hall.

MIT (2015) Glossary, Available at: [http://web.mit.edu/airlinedata/www/Res\\_Glossary.html](http://web.mit.edu/airlinedata/www/Res_Glossary.html) (Accessed: 2nd May 2015).



Nabídka Korean Air Lines splňuje všechny podmínky. *Ministerstvo financí České republiky*. [Online] 6<sup>th</sup> March 2013. (Accessed: 20<sup>th</sup> March 2015.) available at: <http://www.mfcr.cz/cs/aktualne/tiskove-zpravy/2013/nabidka-korean-air-lines-splnuje-vsechny-10294>.

NY Times (2013) American and US Airways Announce Deal for \$11 Billion Merger, Available at: [http://dealbook.nytimes.com/2013/02/13/american-and-us-airways-said-to-vote-for-merger/?\\_r=0](http://dealbook.nytimes.com/2013/02/13/american-and-us-airways-said-to-vote-for-merger/?_r=0) (Accessed: 3rd June 2015).

Oliver Wyman (2015) Airline Economic Analysis 2013., Available at: <http://www.oliverwyman.com/insights/publications/2013/nov/airline-economic-analysis-2013.html#.VD9M1xaty8A> (Accessed: 23rd March 2015).

One World (2015) Member airlines, Available at: <http://www.oneworld.com/member-airlines/overview> (Accessed: 13th July 2015).

Patrick A. Gaughan (2007) *Mergers, Acquisitions, and Corporate Restructurings*, 4th edition edn., Hoboken, New Jersey: Wiley.

Patrick A. Gaughan (2015) *Mergers, Acquisitions, and Corporate Restructurings*, : John Wiley & Sons.

Peter Belobaba, Amedeo Odoni, Cynthia Barnhart (2009) *The Global Airline Industry*, : Wiley.

Peter Belobaba, Amedeo Odoni, Cynthia Barnhart (2015) *The Global Airline Industry*, : John Wiley & Sons.

PWC (2015) Aviation perspectives. The impact of mega-mergers: a new foundation for the US airline industry., Available at: [http://www.pwc.com/en\\_US/us/industrial-products/publications/assets/airline-industry-merger-impact-on-customers-operations.pdf](http://www.pwc.com/en_US/us/industrial-products/publications/assets/airline-industry-merger-impact-on-customers-operations.pdf) (Accessed: 25th June 2015).

Reuters (2014) Czech Airlines to get Korean Air capital boost for turnaround Read more: <http://www.dailymail.co.uk/wires/reuters/article-2804590/Czech-Airlines-Korean-Air-capital-boost-turnaround.html#ixzz3hHVH28qU> Available at: <http://www.dailymail.co.uk/wires/reuters/article-2804590/Czech-Airlines-Korean-Air-capital-boost-turnaround.html> (Accessed: 22nd June 2015).

Rigas Doganis (2002) *Flying Off Course: The Economics of International Airlines*, : Routledge.

Roger Kupping (1983) *Everything You Always Wanted to Know About Mergers, Acquisitions and Divestitures but Didn't Know Whom to Ask*, : Roger Kupping.

Sky Team (2015) *Sky Team alliance*, Available at: <http://www.skyteam.com/en/> (Accessed: 15th June 2015).

Stanley Foster Reed (1999) *The art of M&A: a merger acquisition buyout guide*, New York: McGraw-Hill.

Steven Morrison, Clifford Winston (1995) *The evolution of the airline industry*, : Brookings Institution.

Strategy & (2015) 2015 Aviation trends, Available at: <http://www.strategyand.pwc.com/perspectives/2015-aviation-trends> (Accessed: 4th July 2015).

Sudi Sudarsanam (2004) *Creating Value from Mergers and Acquisitions: The Challenges*, : Prentice Hall.

Sudi Sudarsanam (2010) *Creating Value from Mergers and Acquisitions: The Challenges*, : Financial Times Prentice Hall.

The Globe and Mail (2011) Japanese quake shakes air travel, Available at: <http://www.theglobeandmail.com/report-on-business/japanese-quake-shakes-air-travel/article570932/> (Accessed: 14th June 2015).

William Megginson, Scott Smart (2008) *Introduction to Corporate Finance*, : Cengage Learning.

**Annual reports and official websites:**

1. British Airways (2007 - 2014)
2. Iberia (2007 - 2014)
3. Czech Airlines (2005 - 2010)
4. Korean Air (2008 - 2014)
5. American Airlines (2010 - 2014)
6. US Airways (2010 – 2012)

## Appendix

1. Table of Jet fuel price in USD (May 2000 – April 2015)

Month	Price per barrel/\$	Month	Price per barrel/\$	Month	Price per barrel/\$
May 2000	31,67	May 2005	61,25	May 2010	85,83
Jun 2000	32,92	Jun 2005	68,75	Jun 2010	85,83
Jul 2000	33,33	Jul 2005	69,58	Jul 2010	84,17
Aug 2000	37,50	Aug 2005	77,92	Aug 2010	86,67
Sep 2000	42,50	Sep 2005	92,92	Sep 2010	87,92
Oct 2000	40,83	Oct 2005	100,00	Oct 2010	93,75
Nov 2000	42,92	Nov 2005	70,83	Nov 2010	96,67
Dec 2000	35,83	Dec 2005	72,08	Dec 2010	102,08
Jan 2001	36,25	Jan 2006	75,83	Jan 2011	109,17
Feb 2001	34,17	Feb 2006	72,92	Feb 2011	118,33
Mar 2001	31,25	Mar 2006	78,33	Mar 2011	130,42
Apr 2001	32,08	Apr 2006	86,25	Apr 2011	136,25
May 2001	34,17	May 2006	86,25	May 2011	128,75
Jun 2001	32,08	Jun 2006	86,67	Jun 2011	127,08
Jul 2001	29,58	Jul 2006	89,58	Jul 2011	130,42
Aug 2001	31,67	Aug 2006	88,75	Aug 2011	125,42
Sep 2001	30,83	Sep 2006	75,42	Sep 2011	122,92
Oct 2001	25,83	Oct 2006	72,50	Oct 2011	123,75
Nov 2001	22,50	Nov 2006	72,08	Nov 2011	127,08
Dec 2001	21,67	Dec 2006	75,42	Dec 2011	119,58
Jan 2002	22,08	Jan 2007	68,75	Jan 2012	128,75
Feb 2002	22,92	Feb 2007	72,50	Feb 2012	133,75
Mar 2002	26,25	Mar 2007	77,08	Mar 2012	135,83
Apr 2002	27,92	Apr 2007	85,00	Apr 2012	134,58
May 2002	27,92	May 2007	85,00	May 2012	123,75
Jun 2002	27,08	Jun 2007	87,50	Jun 2012	111,67
Jul 2002	28,75	Jul 2007	89,17	Jul 2012	120,42
Aug 2002	30,00	Aug 2007	87,08	Aug 2012	131,67
Sep 2002	33,33	Sep 2007	94,58	Sep 2012	132,92
Oct 2002	32,92	Oct 2007	98,75	Oct 2012	129,58
Nov 2002	29,58	Nov 2007	111,25	Nov 2012	123,33
Dec 2002	33,75	Dec 2007	108,33	Dec 2012	122,50
Jan 2003	37,08	Jan 2008	108,75	Jan 2013	128,75
Feb 2003	44,17	Feb 2008	113,75	Feb 2013	134,17
Mar 2003	37,08	Mar 2008	130,00	Mar 2013	123,75
Apr 2003	30,83	Apr 2008	140,42	Apr 2013	117,08
May 2003	29,58	May 2008	155,83	May 2013	113,75
Jun 2003	31,25	Jun 2008	161,67	Jun 2013	115,42
Jul 2003	32,50	Jul 2008	162,08	Jul 2013	120,42

Aug 2003	34,17	Aug 2008	136,25	Aug 2013	125,00
Sep 2003	30,83	Sep 2008	140,83	Sep 2013	122,08
Oct 2003	34,17	Oct 2008	96,67	Oct 2013	120,42
Nov 2003	34,58	Nov 2008	78,33	Nov 2013	117,92
Dec 2003	36,67	Dec 2008	57,50	Dec 2013	123,33
Jan 2004	41,67	Jan 2009	61,25	Jan 2014	121,67
Feb 2004	38,75	Feb 2009	52,50	Feb 2014	123,75
Mar 2004	39,58	Mar 2009	52,92	Mar 2014	120,42
Apr 2004	40,42	Apr 2009	57,08	Apr 2014	120,42
May 2004	45,42	May 2009	62,08	May 2014	119,58
Jun 2004	42,92	Jun 2009	75,42	Jun 2014	120,00
Jul 2004	47,92	Jul 2009	71,25	Jul 2014	117,50
Aug 2004	51,25	Aug 2009	78,75	Aug 2014	118,33
Sep 2004	56,67	Sep 2009	72,92	Sep 2014	113,75
Oct 2004	63,33	Oct 2009	80,83	Oct 2014	102,50
Nov 2004	56,25	Nov 2009	82,92	Nov 2014	95,83
Dec 2004	50,83	Dec 2009	82,50	Dec 2014	75,00
Jan 2005	55,42	Jan 2010	85,42	Jan 2015	62,50
Feb 2005	55,42	Feb 2010	82,92	Feb 2015	73,33
Mar 2005	65,00	Mar 2010	87,92	Mar 2015	67,92
Apr 2005	65,42	Apr 2010	93,33	Apr 2015	70,83

## 2. Industry Business Risk ratings

Rating	Business strength
AA/AAA	Exceptional
A	Superior
BBB	Adequate
BB	Weak
B	Poor

### 3. Airlines data

a.

in GBP million	British Airways			
	2007	2008	2009	2010 (March)
EBIT	556	875	-220	-231
Total assets	11384	11123	10488	10677
Net income	304	694	-358	-425
Sales/revenue	8492	8753	8992	7994
PPE	7357	7263	7233	6904
Gross profit	611	883	-401	-531
Current assets	3431	3148	2346	2674
current liabilities	3625	3244	4142	3740
Cash	713	683	402	786
acc receivables	654	586	530	499
total liabilities	8973	7890	8642	8564
shareholders's equity	2411	3233	1646	1913
long term debt	2929	2751	3074	3446
interest expenses	170	176	169	141
operating CF	756	303	133	331

b.

in EUR million	Iberia			
	2007	2008	2009	2010
EBIT	283	-80	-463	-3
Total assets	5871	5634	5046	6013
Net income	322	32	-273	89
Sales/revenue	5521	5223	4231	4582
PPE	1133	1118	1046	1145
Gross profit	446	36	-435	95
Current assets	3930	3184	2684	2947
current liabilities	2114	2305	1763	1923
Cash	2142	600	886	875
acc receivables	116	586	478	561
total liabilities	4010	4070	3495	3881
shareholders's equity	1980	1563	1548	2132
long term debt	353	78	215	210
interest expenses	25	52	40	34
operating CF	312	38	-280	145

c.

in EUR million	IAG Group				
	2010 (9M)	2011	2012	2013	2014
EBIT	418	522	-23	770	1390
Total assets	12893	19753	18976	20777	23652
Net income	212	554	-185	430	868
Sales/revenue	7889	16103	18117	18675	20170
PPE	8080	9584	9926	10228	11784
Gross profit	201	537	-257	487	1106
Current assets	3367	5892	5026	6018	7427
current liabilities	4208	6529	7564	8317	9801
Cash	917	1977	1362	1541	1528
acc receivables	453	1175	1149	1196	1252
total liabilities	10068	14067	15998	16561	19859
shareholders's equity	2525	5386	2678	3909	3485
long term debt	4114	4304	4128	4535	5904
interest expenses	147	220	264	301	237
operating CF	936	770	339	1218	1862

d.

in CZK million	Czech Airlines		
	2008	2009	2010
EBIT	696	-3539	-351
Total assets	10418	7948	6632
Net income	470	-3756	-631
Sales/revenue	22532	19755	16540
PPE	4137	3508	1685
Gross profit	499	-3750	68
Current assets	5081	3222	2884
current liabilities	5659	6267	2696
Cash	543	559	1158
acc receivables	4019	2282	1709
total liabilities	8474	8655	4596
shareholders's equity	101	-2352	376
long term debt	168	59	55
interest expenses	27	79	69
operating CF	-1762	-3066	-1205

e.

KRW billion	Korean Air						
	2009	2010	2011	2011(cons)	2012	2013	2014
EBIT	133,4	1109	394	452,6	318,6	-19,5	395
Total assets	16919	17814	20222,5	22388	22973	22920	23517
Net income	-98,9	461	-301	-199	256	-383	-457
Sales/revenue	9393	11640	11805	12245	12719	11848	11909
PPE	11681	12245	13831	14189	14880	15503	15778
Gross profit	-125	613	-443	-269	432	-470	-283
Current assets	2496	2402	3022	3350	3365	3139	4948
current liabilities	4614	6106	6524	6625	6207	7758	7441
Cash	716	733	1381	1465	1465	1126	796
acc receivables	870	854	898	943	840	1011	1012
total liabilities	13862,2	15301	18036	19619	20069	20180	21264
shareholders's equity	3057	3499	2186	2768	2904	2740	2201
long term debt	2075	1260	1049	2300	2039	1220	1602
interest expenses	486	565	497	719	605	526	476
operating CF	-118	3075	1820	2008	2306	1949	1863

f.

in USD million	American Airlines				
	2010	2011	2012	2013	2014
EBIT	308	-1037	148	1399	4249
Total assets	25088	23848	23278	42278	43771
Net income	-471	-1979	-1876	-1834	2882
Sales/revenue	22170	23979	34855	26743	42650
PPE	14838	14306	13402	19259	23084
Gross profit	-506	-1979	-2445	-2180	3212
Current assets	6838	6757	7072	14323	12112
current liabilities	8780	8630	9011	13806	13435
Cash	168	1215	1330	2175	1768
acc receivables	738	902	1124	1560	1771
total liabilities	19780	30959	24891	45009	41750
shareholders's equity	-3945	-7111	-7987	-2731	2021
long term debt	8756	6702	7116	15353	16196
interest expenses	823	811	632	856	887
operating CF	1241	743	1285	675	3080

g.

in USD million	US Airways		
	2010	2011	2012
EBIT	781	426	856
Total assets	7819	8335	9396
Net income	502	71	637
Sales/revenue	11908	13055	13831
PPE	5100	5651	6437
Gross profit	502	90	637
Current assets	2909	3049	3582
current liabilities	2840	3160	3303
Cash	1859	1947	2276
acc receivables	311	327	298
total liabilities	7735	8185	8606
shareholders's equity	84	150	790
long term debt	4003	4130	4376
interest expenses	329	327	343
operating CF	804	472	1017